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When would they meet again? — *Page 35.*

JOE'S SIGNAL CODE

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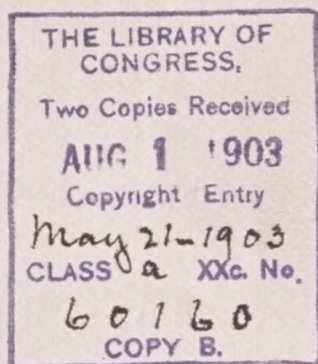
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BOSTON
LEE AND SHEPARD
1903

Published August, 1903



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JOE'S SIGNAL CODE

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35

TO
‘MY BOYS’ IN THREE STATES,
NOW GROWN TO BE MEN,
WHO ARE AN HONOR TO THE LAND IN WHICH
THEY DWELL

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JOE'S SIGNAL CODE

CHAPTER I

THE PASSENGERS ON THE "KATHARINE"

THE shrill whistle of the second mate sounded "Hoist away"; then the noisy engine swung up another load of iron pipe and lowered it with a rush into the hold of the stanch ship *Katharine*, lying in her dock in New York harbor. The men had been working all night, and now, on this beautiful morning of October 10th, the ship was almost finished. There had been a freight wreck on the Jersey Meadows and that further delayed a shipment of pipe that should have been received two days before. This last lot would be aboard by seven o'clock, and at ten promptly the good ship was to bid farewell to America for a long trip to the East Indies by way of the Cape of Good Hope. There was lying alongside a beautiful steel naphtha launch about twenty feet in length, fitted to stand a fairly rough sea. Two men were busily engaged in detaching the

engine and other parts from the little craft, preparatory to being taken aboard. This was the last piece of cargo; the shipping party having sent the boat down from Newburgh the afternoon before. The cradle for the trim little hull was set up and ready to receive it. Scarcely had it been hoisted in and stowed away than a cab drove down the wharf to the ship's side. There alighted a handsome, well-built young man, followed by a boy about the age of fifteen; the latter dressed in a dark blue sailor suit. The lad immediately ran up the broad gang-plank and disappeared on deck, while his companion remained with his several pieces of light baggage.

Shortly there was a hail of welcome from the deck as the first mate, Mr. Harry Henderson, received his passengers on board. The newcomers were not strangers. The elder of the two, Frank Miller, was a nephew of Captain Henderson, the principal owner of the Red Cross Line; Harry, the first mate, and Joe, the boy who had just arrived, were sons of Captain Henderson and they comprised all of the Captain's family, their mother having died when Joe was a baby.

Joe was first in the cabin, into which their baggage had been brought, and was already putting

things to rights under Harry's directions; their heavy luggage having been sent aboard the day before, so that now they were ready to sail. The ship was commanded by Captain John Duncan, who, with another passenger, Mr. Robert Purdy, was to join the vessel as it passed the Battery; they having matters to arrange at Captain Henderson's Wall Street office before sailing. At just ten o'clock an important looking tugboat took hold of the stern hawser and slowly pulled the magnificent ship out into the stream, and then, fastening alongside, commenced the trip down the majestic river.

"There they come!" shouted Joe, as a tug put out from the landing stairs at the Battery. When it arrived there came aboard Captain Duncan, the master of the *Katharine*, a hearty, bluff seaman of about fifty-five, followed by Mr. Robert Purdy, of the General Electric Company of Poughkeepsie, New York, and lastly Captain Henderson, who had remained a moment to give some final directions to the tug that brought them.

"Well, my boys! I must say good-by," said Captain Henderson, in the cabin, when they had left the city about six miles back of them. "I have no fears for the voyage. The *Katharine* is stanch and well manned. I will leave you in God's care."

Then affectionately kissing them farewell, he ascended to the deck, where he bid good-by to Captain Duncan, Mr. Purdy, and the crew, who gave him a ringing cheer as the tug cast loose.

Joe stood on the stern deck and silently gazed at the little craft until it was lost to view and then the dear fellow hid his face in his hands and wept. It was his first separation from that loving father.

The party who sailed on the *Katharine* was a happy one. Frank Miller was really raised in the Henderson family, having been left an orphan at an early age. His father had been well-to-do, and now, after learning the marine machine trade thoroughly, he at last bid good-by to the shops of Morton & Co., and determined to see the world; and as this was to be Harry's last trip, he gladly accepted the often extended invitation to make a trip to the East Indies, but which he was hitherto unable to accept. Joe was to go along, of course, as he had now finished a good course of schooling at private institutions, and was in somewhat delicate health. A medical friend told his father it would be just the thing for the boy, and that settled it. After they arrived at Hong Kong, Harry was to take charge of that office for a few years and then return to New York to succeed his father, who wished to retire

from active work. Frank and Joe were to return via San Francisco in about a year.

It was a pleasant company, and the genial Purdy added one more to it. He was going with a lot of electrical machinery, some of which was consigned to the South African Electric Co., at Cape Town. Of this he was simply to supervise the unloading and delivery and then proceed with the *Katharine* to Manila and Hong Kong with another larger lot of the same freight, and was to remain in China for some years.

At just three o'clock that glorious afternoon, the *Katharine* discharged her pilot and under a fair spread of sail was on her way to the Canary Islands, at which point the first stop was to be made. Although the weather was fine, there was a swell running for the first few days that kept our passengers below most of the time with sea-sickness with the exception of Joe, who was up and almost as happy as a lark after the first day. As the voyage progressed he gradually learned the ropes in his quick, boylike way, so that by the time the Peak of Teneriffe was sighted, he was a pretty fair apprentice. At first Harry would not permit him to go aloft, but Joe soon showed such aptitude that there were no further restrictions placed upon him. Frank had

brought with him his two favorite guns, a 43-caliber Winchester rifle, and a fine breech-loading shotgun, with plenty of ammunition for each. He was an excellent shot; this being about the only sport in which he indulged. He had numerous opportunities at sharks, many of which he killed by catching them in the eye, much to the delight of the crew who had never seen such skill before.

Sometimes Mr. Purdy and Frank engaged in chess playing, to while away the time; again, Captain Duncan would entertain them with stories of the sea. In this way time passed pleasantly; nor were their amusements solely confined to the cabin for Mr. Purdy was a fine performer on the mandolin and also a good amateur magician. Many a wonderful feat he performed for the crew, who voted their passengers the best that had ever sailed with them.

So the days came and went, as they made the lonely stretch of sea between New York and the Canaries. Beyond discharging a small portion of their cargo and obtaining some fresh provisions, there was little else to do, so that in a few days the grand old Peak of Teneriffe was gradually being left behind them as they headed for the Equator, which was now the next object of interest to our

travelers, that is, if an imaginary line could be classed as an object. Harry called Joe's attention to the Polar Star; telling him to notice the difference in position above the horizon as they gradually drew to the South. Joe saw, with feelings not un-mixed with awe, that their faithful guide of the Northern Hemisphere was slowly but surely getting closer to the ocean as they were approaching the line, and at this rate would soon disappear beneath the shining, watery horizon. Harry explained to him that the rotundity of the earth was responsible for this.

"It would never change if the earth were flat, as the ancients supposed it to be," said he.

"But what shall we have in its place when we once cross the Equator?" asked Joe.

"The Southern Cross will take its place there," said Captain Duncan, who was sitting with the party that evening as they were slowly passing through the Doldrums. "It's lucky for us that we don't have to lie here and look at our northern friend for a week, as often happens in these latitudes, for this is the region of calms."

CHAPTER II

CROSSING THE EQUATOR

THE *Katharine* made a fair run through the tropics. There had been a few blows, but as yet nothing of note occurred. The weather had been intensely hot during the trip across the line, and was still very warm. They were now about the tenth parallel south of the Equator, with about twelve hundred miles more to the Cape of Good Hope. Joe had grown quite brown from exposure, looking strong and healthy. He had become a favorite with the crew, among which there were men who had sailed under his father, for the Red Cross Line treated its sailors so well that they rarely left its service for another berth.

As they approached the Cape he realized the sensations of sailing out of fall season in the Northern Zones into the spring of the Southern world. It was the first winter that he had ever missed.

One evening, when still about a thousand miles from port, the party were all seated on deck to en-

joy what cool air might be stirring. Mr. Purdy was playing on the mandolin, "to keep the rust off the strings," he said; Frank and Joe were telling Harry and Captain Duncan of the many wonderful things they had seen at the World's Fair at Chicago, where they spent a month; Joe having been much impressed with the great electric display, and particularly with the electric fountain, and the great search-light on the Manufacturers' Building.

"They handled it as easily as a toy and seemed to throw signals on the clouds," said Joe. "Why couldn't ships do the same to speak to each other at sea?"

"They could," said Mr. Purdy, "and the time is not far distant when they will do it. Our Navy now has an incandescent light system by which they can communicate, but the method will be simplified; a regular telegraph code will be used, making it more comprehensive than now. For instance, you see that star back there in the west, just on the edge of the water? If we could imagine that was a small arc lamp or a strong incandescent light that could be shut off rapidly by quick working shutters, we could read the flashes, with some practice."

Captain Duncan turned and looked at the star and, quickly rising to his feet, said:

“That is a light; it's a steamer going in our direction.”

At this moment the lookout also called the sail. All other conversation ceased, as they stood looking at the steady white light that had now just appeared above the horizon. The stranger was fully twelve miles astern. Assuming that she was going at the rate of ten knots an hour, it would be some hours before it caught up to them. They watched it intently for awhile and saw that it was gaining slightly, when suddenly there was a flash of light from the water's edge that caught and illuminated some low-lying clouds.

“A search-light!” exclaimed Harry. “She is either a war vessel or a private yacht. If that's the case, they will probably overhaul us by midnight.”

When it passed shortly after midnight, signals were exchanged showing it to be the *America*, a full-rigged steam yacht from New York, bound for Cape Town; fifteen days out from Rio Janeiro. Like a phantom it silently passed on into the darkness under light steam; the electric light on the foremast gradually growing less in size as the distance increased. An hour later Frank stood alone looking at it as she was forging ahead, his thoughts

running in strange channels. A feeling of utter loneliness came over him.

“Like that fast disappearing wanderer of the sea,” he thought, “we come and go and are seen no more,—but there is no port for me. Others believe it and take comfort from it, but it is not revealed to me.”

Thus he pondered and, as it were, strove with himself; for be it known that, while Frank Miller was a gentleman of the highest type and possessed of all the qualifications of a Christian, according to the moral law; he was indifferent to the one thing needful, yet with all reverence for things sacred, and respect for human belief.

“There is simply a natural law,” said he, mentally, “and it governs all things.”

Gazing into the heavens, he caught sight of that glory of the Equatorial skies, the Southern Cross.

“Who placed them there?” whispered his soul. “Who directs their course from time unknown into the endless ages? Who is the Author of all the celestial maze that gives man his first ideas of mathematical precision? There must be an Author and Designer just as there was for the swift-flying machinery that is throbbing in the heart of that ship of the distant light now so far away.”

Then he murmured: "There is a God! I feel it now; I know it, and I am His child!"

There was no mere lip service in the prayer that ascended to the Throne from the bosom of the broad Atlantic that midnight hour. The eyes that were blind, and the ears that heard not; saw and heard now.

CHAPTER III

A SIGNAL OF DISTRESS

JOE was on deck early the next morning, notwithstanding his late hours the night previous. It was, however, because a sail had been sighted about eight miles ahead and he was anxious to see the stranger. It proved to be the yacht that passed them during the night.

"She is lying to, for some reason," said Captain Duncan. "She has met with some accident probably."

There were various speculations as to the yacht during breakfast, which was eaten in shorter time than usual. When they reached deck again the stranger was not more than a mile distant with a signal flying, indicating that she wished to speak the *Katharine*.

As they approached, a steam launch put out on the smooth sea and headed for the coming ship which was now less than a mile away. It was evident that they had some important communication to make.

In a few minutes the launch was alongside and a man in blue uniform came over the rail, introducing himself as Mr. Harris, first mate of the steam yacht *America*, from New York, bound for the Cape, making a tour of the world.

He said that about four o'clock that morning the main steam pipe from the boilers, leading through some of the men's quarters, had burst and severely scalded the first and second engineers and several of the sailors so badly that at first it was thought some were beyond recovery. In fact, it laid up more than half of the men with burns and scalds of more or less severity. They unfortunately had no extra steam pipe on hand; through some oversight, and wanted to know whether the *Katharine* had any in her cargo.

"What size is it?" asked Captain Duncan.

"Eight inches, and is hung in ten feet lengths."

"Have you a pipe cutting machine?" asked Frank, as Harry went below to examine the manifests of cargo.

"I believe they have," answered the mate. "I don't know much about the machinery, but am almost certain they cut some of the large pipe while we were on our last summer's cruise."

In a short time Harry reported that there was a

large lot of the requisite size in the cargo. He also thought it was among the very last stowed away, and might be easily gotten at. The forward hatch was removed and Frank, with foot rule in hand, descended.

In a few moments he called out that there was plenty of it, and right on top, too, but all in twelve foot lengths. In order to use it the pipe must be cut off and then threaded to enter the flange.

At the request of Captain Duncan, Harry, with Frank and Mr. Purdy, were taken to the yacht to see what was really required, as they were familiar with steam machinery. This was speedily done. They returned in a short time, after having ascertained the extent of the accident, and what the requirements were.

“They need two lengths of the pipe only,” said Frank. “They have all necessary fittings and tools to make the repairs, but the worst feature is, that they have no one to handle the engines, which, by the way, I erected myself, some years ago, the yacht not being named at that time. They have an intelligent first fireman, who might do for a while, but he cannot attend to it single handed. In fact they must have immediate assistance, as they seem to be very short handed both for steam and sail.”

“And what’s still worse,” said Captain Duncan, “one of the Flying Dutchman’s storms is coming on. The barometer has fallen steadily since midnight, and is still falling rapidly. Are there any passengers on the yacht?”

“Yes!” said Frank, “they told me the owner and his wife, daughter, and another lady, were aboard. I didn’t see them; they are so busy with the care of the poor fellows that they didn’t come out of the cabins which they have turned into a hospital. The ladies are acting as nurses, under the direction of the doctor, who told me some of the men would be disabled for a month, and the worst to all, the two engineers. I can see only one thing to be done, and that is for Mr. Purdy and myself to go on board and make the repairs, which I think can be done in six hours, as they have splendid appliances, and then we can run the engines until she gets to the Cape, which is now about three days’ sail away for the *Katharine*, unless she is detained by the coming storm——”

“Which is not far off!” said Harry, “and you must make haste if Captain Duncan agrees to it.”

There was no trouble on that score, so hastily getting ready a few necessary articles, the pipe having been hoisted out, Mr. Purdy climbed over the rail,

followed by Frank, who affectionately kissed Joe and shook hands with Captain Duncan and Harry, who whispered, "Don't lose a minute; it is going to be a hard blow."

The *Katharine* was soon under way again. When Frank sprang on the yacht's deck, he looked around once more to the fast receding ship that had been such a pleasant home for the past few weeks. From the stern he saw a light figure waving a last good-by. It was Joe.

CHAPTER IV

THE LITTELL FAMILY

CAPTAIN JONES, of the yacht *America*, was greatly relieved when he found that our two voyagers had volunteered their services for the relief of his ship. They went to work at once to get out the damaged pipe; while this was being done, Frank had the new pieces brought in and, after carefully measuring them, they were placed in the cutting machine run by the small auxiliary engine, and cut to the desired length, then threaded to receive the flange. All this took a few hours. While it was being done the old pipe was cleared out so that the new could be hoisted with chain blocks to its position. The gaskets were put in readiness by Mr. Purdy, who, in addition to being an expert electrician, was also able to work in emergencies where machinery was disabled. Then they pulled up the new pipe with the aid of the firemen.

Twice within the last hour Captain Jones had called Frank aside and spoken to him in a low tone

in regard to the approaching storm. It would be upon them in an hour; while they were doing all they could to meet it without steam, he wanted the latter if possible. The pipe was up and in position for accurate fitting; the banked fires had been started up some time previously, and steam was rapidly rising and now the last thing was to be done. If the vessel remained ordinarily quiet, it could be done in time. The atmosphere under the impending storm center was almost stifling. Not a word was said but to ease or tighten a little on the chain blocks, when suddenly Captain Jones shouted:

“How soon will you be ready? The squall will be on us in three minutes, and everything must be closed.”

“We will need only one!” was the reply. “Quick now!” on the great wrench another turn, another, and yet another.

“Turn on steam!” called Mr. Purdy to the fireman in waiting.

The bell rang and Frank jumped down as the outside doors closed.

“Secure the loose work!” he cried, as he gradually opened the wheel.

Then engines were already turning slowly when

"Go ahead full speed" was rung. Like a thing of life the triple cranks rapidly threw their polished sides around and around. Suddenly there was a deep thunderous roar as the *America* raised herself to meet that awful storm. Now she slid down a watery plane with her propeller trying to race as it jumped clear of the sea. Then she trembled and shook, yet riding in safety through the storm king's terrible dominion, in which the Flying Dutchman is said by the superstitious sailors to be battling to this day as a punishment for his awful and profane vow.

However, Frank, as he held that young giant in check, now urging it on, now throttling it, had no time to think of that legendary Hollander; he was thinking of his friends on the *Katharine*. How were they faring? As for their fighting the storm, he feared nothing. The ship was excellently manned and officered, yet he found himself silently asking for the protecting hand over the storm-tossed ship which he had left.

So the afternoon and night passed. The gallant little steamer was equal to the conflict which, as yet, showed no signs of abatement.

About nine o'clock the next morning Captain Jones sent word in to the engine room that the gale

was blowing itself out. There were no signs of the *Katharine*, it being altogether likely that she was blown out of her course and might be some time getting into port.

During the afternoon the gale moderated so much that the yacht was put under low steam and by night there was only a heavy swell running, and that was subsiding so rapidly that it was decided to bank the fires and run into port under sail, there being men enough available for ordinary weather. This gave those below deck an opportunity for the rest of which they now stood in need.

The following morning Frank and Purdy were invited into the cabin for breakfast when they, for the first time, saw the owner, Mr. Littell, and his family. Mr. Littell thanked them for their valuable and timely assistance, and then presented them to his wife, his daughter, Miss Helen, and her friend, Miss Williams, who was accompanying the Littells on their trip.

Doctor Peale, who was also one of the party, reported all the sufferers doing remarkably well; some were already able to do light duties, and the two engineers who had suffered the most would, in all probability, come around in much less time than he first supposed, probably in a week or ten days.

The ladies wanted to know all about the *Katharine*, and Mr. Purdy gave them a glowing account of the ship and her officers, not forgetting Joe.

"I would give anything to see the dear little fellow," said Miss Helen. "I know he is just the nicest boy in the world; we saw him waving good-bye as your ship drew away, but we shall see him at the Cape."

After breakfast the ladies, with Mr. Littell, took a look into the engine room and were delighted to hear Mr. Purdy tell them that Frank, by a singular coincidence, had superintended the erection of the yacht's engines, but did not know it until he came to see what was required. ●

"Well, indeed! I do not know what we should have done without them, or rather, someone to run them during that awful blow, situated as we were; with so many of our crew disabled; we feel that we owe so much to you gentlemen," said Miss Helen.

Mr. Purdy blushed and tried to say it "was nothing" and turned to Frank to help him out, but that young man had given the party the slip and was engaged with Mr. Littell in a visit to the sick bay, where he had a long talk with the first and second

engineers, both of whom he had often met before in the shops of Morton & Co.

They were now drawing near to the coast of Africa.

“By to-morrow morning we shall sight Table Mountain, I think,” said Captain Jones, and, sure enough, at daybreak that magnificent amphitheater formed by mountains on either side of the grand old Table Mountain now showed plainly ahead. In a few hours the *America* came to a safe anchorage in Table Bay, but the *Katharine* was not there, although she was hardly to be expected as yet. But her passengers were not entirely free from forebodings.

CHAPTER V

“MAN OVERBOARD,” AND A RESCUE

THERE were in the crew of the *Katharine* men of different nationalities, who, while they were classed as Americans, still retained many of their ancestral characteristics, all speaking English, of course. Among these there was one native-born German, whose parents left him an orphan in his boyhood, when he emigrated to America. Here he soon acquired that singular dialect so freely spoken in the Blue Mountain districts of Pennsylvania, known as Pennsylvania Dutch. His name on the ship's book was Andrew Speigelmier. The men knew him only as “Andy,” and delighted in getting him excited in order to hear him talk Pennsylvania Dutch. However, Andy was a good man before the mast, having been in service about four years, but he could never wholly drop his dialect, which would come to the surface when under great excitement. Andy had taken a great fancy to Joe, who, be it said, was a great favorite with all the crew. Often

during the voyage, when, by reason of fair wind and weather, the men had but little to do, they would gather on deck and, among other amusements, would get Andy to sing, “Dess isht Mein Schnitzle Bunk,” or some kindred song from his repertoire, always eliciting rounds of applause from the crew, who thoroughly enjoyed the quaint songs.

At the time of the accident to the *America*, just as the yacht was being left behind, he remarked to Joe, who was gazing over the rail:

“Mister Choe, we get a hart storm by and by; it soon blows gore avech!”

Joe, in a general way, comprehended that Andy meant there would be a hard storm soon.

“Yes, Andy; I wish they hadn’t gone over there,” pointing to the yacht, and then, running to the cabin deck, he waved a last farewell to Frank, as he landed on the yacht’s deck. Captain Duncan had all precautions taken against the coming gale. Everything was made snug and tight, while Harry cautioned Joe to go below as soon as the blow commenced. It was now well into the afternoon. The yacht had been out of sight for some time when the storm that was close at hand broke upon the gallant ship, making her tremble like a frightened thing. The screaming of the gale through the rig-

ging and the terrible seas that rose were a revelation to Joe, who tried to reach the cabin to escape the fury of the wind, when the vessel made a lurch that sent him reeling across the deck. At this moment a heavy wave came curling inboard, sweeping everything loose before it. Joe saw it and in his excitement vainly tried to escape by jumping on the rail, the very worst thing he could have done, and in an instant was overboard, stunned and helpless.

“Man overboard!” Oh! the terror of it, as the awful cry was repeated. The furious winds, the angry seas dashing on the ship as if trying to destroy it in their mad fury. The crew rushed to the side in an instant. There was no order given,—men trained to such emergencies act at once. Harry heard the alarm and made all haste over the slippery, slanting decks, arriving just in time to see a man half stripped make a leap into a second wave driving in, and then, diving through it, appear with a slight form in his muscular arms. He almost reeled when he saw it was Joe, seemingly lifeless in that strong grasp. Another heavy sea was making its way toward them, but happily it was not a comber; before it reached Andy a line had been thrown him and secured as best he could. When the wave reached him he had been drawn to the side of the

vessel, and as it rose he came with it; two strong men grasped him and in an instant both were on board. All this was done in a few seconds, yet it seemed an age to that brother who, with an agony that did not show itself in the face of danger, quickly received Joe and bore him to a place of comparative safety, for the storm was now at its height. Joe was restored to consciousness and taken below, where he soon felt better. Hastily kissing him, then with a prayer of gratitude on his lips, Harry made his way on deck to find Andy on duty as usual, with nothing worse to show for his adventure than a bruise on his right arm where the life line had cut into the skin. There was nothing to be said in that terrible din, but Andy caught a look on Harry's face that was gratitude itself. So the storm kept on until nightfall, when it seemed to increase in fury. Captain Duncan remained on deck, shouting orders through his speaking trumpet as emergencies arose. Harry had been below for a little while and found Joe had been suffering some with sea sickness, but he was now in his berth asleep. About midnight, Captain Duncan saw that the worst was over and went below, leaving Harry in charge, although it was still blowing a heavy gale. In the morning Harry reported that all was tight and snug, adding

that the gale was subsiding. At noon an observation was taken, showing that they had been carried out of their course fully a day's sail.

Captain Duncan thanked Andy in the presence of the crew for his brave act, much to his confusion, whereupon the crew gave three ringing cheers for the Captain and retired with Andy from whom they asked a "speech," as usual, but Andy simply said:

"You see, boys, when I see dar yung 'ketzer,' craddling on de rail——"

"Don't you mane the fince?" said a Celtic voice.

"Nay, du avicher uchs; I mean shusht wot I say; when he craddled up de rail——"

"Say, Andy! what d'ye mean by 'craddle'?"

What Andy said to this may pass current in some districts hidden by the Blue Mountains in Pennsylvania. It served, however, to raise a hearty laugh, as it always did, but the fact was this: these jokers well knew that Andy was a hero, but it meant nothing to him nor them. Any of the others would have done the same thing for Joe, who gratefully thanked Andy and all of the crew for saving his life.

CHAPTER VI

HOW THE SIGNAL CODE WAS MADE

It was now the second day after the arrival of the *America* at Cape Town. Everyone on the vessel was in good spirits; the doctor reported the sufferers in fine condition, and on the road to a rapid recovery. The original intention was to remain here about a week, but in the shape matters were, the stay would probably be somewhat longer. Other vessels arrived but none had seen the *Katharine*. Mr. Littell arranged a trip ashore for the following day, in which our two friends were to participate; but Frank begged to be excused on the ground that he would oversee some repairs in the engine room for Mr. Knight, the chief engineer, who was as yet not able to move about, so it was planned that Mr. Purdy should go. Captain Jones was positive that the *Katharine* would be in that day and Frank wanted to welcome her.

About four in the afternoon there was a sail reported entering the bay, that was at once recognized

as the expected vessel. Captain Jones had the yacht receive the incoming ship in its best style, and sent the steam launch with Frank Miller out to meet her. Even the small rapid fire guns, of which there were two on the *America*, joined in the salute as the noble ship slowly glided by to her anchorage. The *Katharine* had not suffered any damage beyond the smashing of one of her boats. There was an informal reception on board the yacht that lovely evening. It was a late hour when the launch put off from the *America*, at the close of it, with our friends of the *Katharine* on board. At this reception Captain Duncan said, he thought it would be about four days before the ship could sail, on account of some necessary repairs, and during this time such cargo as was destined for the Cape would be discharged and again some shipments for the East Indies taken aboard. While this was being done there were frequent visits exchanged between the two vessels; Joe becoming a welcome guest on the yacht, where the story of his almost miraculous escape had been told. Directly Captain Duncan announced that the *Katharine* would sail, in about thirty-six hours and, with a merry twinkle of his eyes, said that his first mate was not needed the day prior to sailing; he was therefore excused, if he had any other business on

hand. Upon this the ladies on the *America* arranged for a trip out to sea, which now was as smooth as a mill pond. They would start at nine the following morning, returning during the afternoon. This was to be followed by a reception at the home of the American Consul that evening, to which the officers and passengers of both vessels were invited.

The only guests on the yacht that morning were our four friends from the *Katharine*. Harry and Frank were neatly and tastefully dressed, as was Mr. Purdy, while Joe looked like a picture in his natty sailor suit. The yacht gracefully swung around and saluted the *Katharine*, then glided out toward the summer sea. The second engineer could now care for the engines for the short trip.

There was a merry party seated on the deck. Music, songs, laughter, many a pleasant story was told, and so the time passed until dinner was announced, served in royal style in the main cabin. Joe was compelled to relate his experience in being washed overboard, which he did reluctantly; then Mr. Purdy kept the company laughing with his clever imitations of droll characters, and so the dinner ended. During the afternoon the yacht was headed toward the Bay, the party having thoroughly

enjoyed the trip that would end in another hour. Joe, as usual, was interested in the machinery, and in course of the afternoon asked Mr. Purdy to explain to him how a search-light was operated, which Mr. Purdy did.

“Don't you remember!” continued Joe, “the night we first caught sight of the *America*, you were just engaged in telling me how one ship might speak to another by throwing light on the clouds. Why can't we agree on some signals now to say ‘*We need help*,’ ‘*Hurry*,’ ‘*All well*,’ and so on. Couldn't they use the electric ray itself moving up and down in the air?”

“But! Joe, we haven't any search lights on the *Katharine* except such as are among our electrical goods in the cargo, and more than that, the *America* goes from here to Australia, and then up through the Pacific to San Francisco. We shall probably never meet her again.”

“Yes, I know, but then we *might*!” said Joe, with a boy's persistence, at which some of the party smiled.

“Now, Joe! you and I will just make up a small code of signals,” said Helen, “so when either of us sees the light in the sky we shall know and come to each other, if we are wanted. We will try them

this evening when we get back from the reception. I will have two copies made, one for you and one for me, and they will cover all emergencies that may arise at sea."

"Oh, thank you!" exclaimed the delighted boy. "Who knows but that we may use them some time?" Prophetic Joe!

Before entering the harbor, another amusement was indulged in. A target made of canvas was set up on some empty casks and dropped astern. Then, when the yacht was several hundred yards away, the rapid fire guns were brought to bear on it. There were over twenty shots fired. Helen made magnificent hits every time, as did Frank Miller. Harry also had a fair record, but neither of the others did well.

Then Mr. Littell brought out a fine rifle and another target was set up. This weapon, too, Helen handled with equal facility. In this sport Miss Williams surpassed by breaking bottles as they were thrown from aloft, but the master shots of the day were Frank's, he breaking two thrown at one time; and thus the day ended. Nor were the crew of the *Katharine* forgotten. Mr. Littell sent them a handsome present which was received with a hearty cheer for the donor. Mr. Purdy excused himself early

from the reception, saying he wished to write to his wife, now that they were to leave the following morning. As Helen wished to try the code of signals, the whole party proceeded to the *America* before parting for the night. Joe was delighted with the arrangement. The code was gotten up by Helen and was simplified by Mr. Purdy, who suggested that it be done by number. Thus: one flash for one, two flashes for two, three for three, and so on up to six. That is; the beam should be thrown into the air and then lowered to make one, and this repeated would make two, and so on. Then, when a number was made the code was consulted and it was seen what was wanted.

“For instance,” said Helen, “you would see a steady light low down for a moment, then followed by 3—6. You would look and find that 3—6 meant, ‘Is that the *Katharine*?’”

The scheme worked to perfection, but, being a boy's whim without any apparent necessity for it, no one thought it would or could be used under existing circumstances. After this there was a little lingering by our young men before starting for their ship that lovely December night. There was much to talk about; the dear ones at home, the approaching Christmas and then the voyages before them.

When would they meet again? Somehow this did not impress Joe, so he went down below and took a look at the storage batteries with the young electrician in charge, wondering all the time when the others would call him, to go.—Innocent Joe!

N. Y. Y. C.

AMERICA

CAPE TOWN, AFRICA,

December 10, 1893.

SEARCH-LIGHT SIGNAL CODE

- 2 — 3 All well.
- 2 — 4 No assistance needed.
- 2 — 5 Homeward bound.
- 2 — 6 Wish you safe voyage.
- 3 — 1 This is the *Katharine*.
- 3 — 2 Send help.
- 3 — 3 Coming at once.
- 3 — 4 Is that the *America*?
- 3 — 5 Do you need help.
- 3 — 6 Is that the *Katharine*?
- 4 — 2 This is the *America*.
- 4 — 3 Good-by.
- 6 — 4 Good-by, sweetheart.

CHAPTER VII

A NEW NUMBER ON THE CODE

WITH the turn of the tide, which occurred about nine o'clock the following morning, and with a fair breeze to help her, the *Katharine* pointed her bow toward the Atlantic again, to double the Cape of Good Hope for the voyage across the Indian Ocean. The steam launch came over from the *America* with Mr. Littell and the ladies aboard to accompany them a few miles and then bid them adieu. Mr. Littell came aboard the ship and was having a conversation with Captain Duncan, while Joe, followed by Harry and Frank, descended to the ladies in the little steamer to say a last farewell.

“ Now, Joe! ” said Helen, “ we shall remain here for about another week as papa has both business and pleasure in view, and then we expect to cruise across the Indian Ocean to Melbourne in Australia, as you know. We shall remain there for some time, as papa is going to open a branch office for his business. While this is being done the yacht shall

go to Samoa (if we do not go there first) and after leaving us there shall return to Melbourne. While mamma's health is improved, it is not at all good, so for this reason we want to make the cruise a long one. It may be a year or more before we again reach New York. So you see it is not likely that we may use our code for some time to come, but I want to give you our route as we already know yours. Of course, if mamma thinks it best for her health, we may remain at Samoa for an indefinite time while the yacht may return to New York without us. Mamma has a map for you with our route traced out as far as we know it."

While Mrs. Littell was going over the map with the delighted boy, the others were saying their farewells, as the time for separation had come. The ladies kissed Joe affectionately as he left the launch with his small package in his hand. Then all shook hands and the launch turned back from the stately *Katharine*. As they passed into the distance there were two fair hands fluttering handkerchiefs to the small group on the stern deck of the ship. Mr. Purdy, who had joined the party, was also watching the little craft recede, with his binoculars. Suddenly he said:

"Joe! where is your code? Look at that hand-

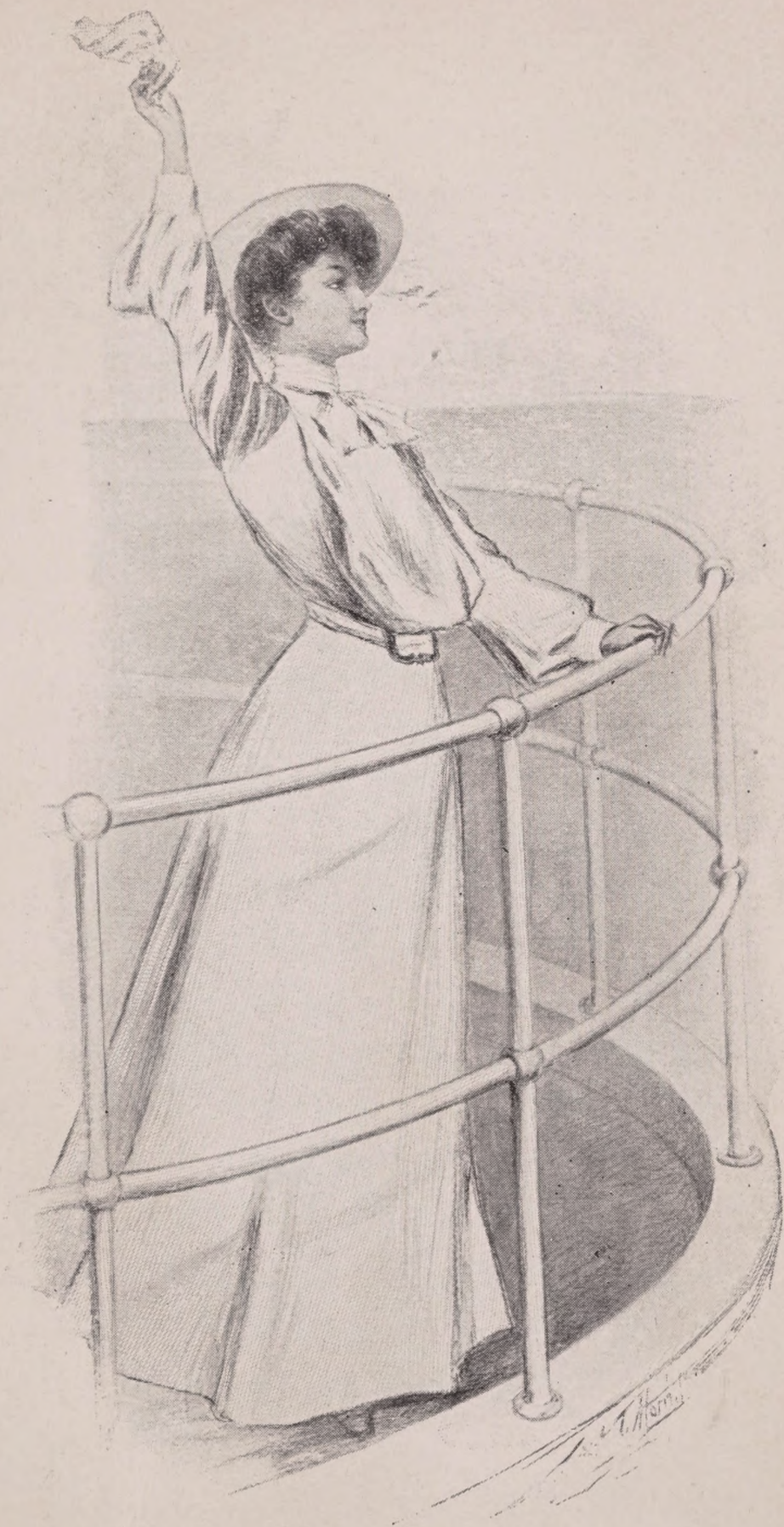
kerchief; aren't they making regular signals? Yes, surely! there it is again: 6—4. What does that mean?"

Joe hastily opened the envelope and straightened out the paper.

"6—4. Why, that's a new one they must have added last night when Miss Helen went down to get the envelope. 6—4 is 'Good-by, sweetheart.'"

"Whom on earth does that mean?" said Purdy. "There are three that signal will fit," said he smiling and glancing around. "She is getting away from us. Quick! see what you can reply."

Alas! there was nothing could be said but 4—3, which meant "Good-by." The launch acknowledged this; then distance made them indistinct and the *Katharine* was alone again, steering for the southern extremity of Africa, which was now close at hand. That same evening the ship was fairly sailing on her course toward the Indian Ocean, with no stop to make until the Port of Manila was reached. The weather was very fine now, as December is a summer month in this hemisphere. Our usual party was again assembled on deck listening to the songs of the crew, among them some of the funny Dutch airs that Andy sang, and he never failed to create a roar of laughter among his hearers



who, while they did not understand the words, applauded the comical rhythm, together with his funny rendition. Thus that evening passed, but during the night the wind changed and blew a steady breeze from the northeast and continued for several days, much to their discontent, so that at the end of a week's sail they had made but little headway. During these days, however, Harry lost no time in teaching Joe the rudiments of a seaman's profession, and he proved an apt pupil. It was intended to educate him for sea life; then, if he manifested a liking for it as Harry had done, he could remain or go ashore into one of the offices, just as circumstances would govern the situation. Captain Henderson was now wealthy and desired no greater pleasure than that of seeing his two boys take his business in hand, for it was increasing with each year. The Red Cross Line had a reputation for promptness and reliability in ocean transportation that was second to none. They never wanted for freights, and, in fact, business was getting so heavy that it was contemplated adding steamers to the line as they already ran a small one in the Eastern coast trade. For this reason Harry was to remain at Hong Kong for a few years before returning to New York.

CHAPTER VIII

ANXIOUS HOURS ON BOARD THE "AMERICA"

AFTER the departure of the *Katharine* from Cape Town, there was a family council held on the yacht at which Mr. Littell said that the boat required docking, having fouled considerably, and in addition to this, there were good reasons advanced by Dr. Peale why the *America* should go direct to the Samoan Islands, on account of the improvement in Mrs. Littell's health, which might be retarded if the yacht went to Melbourne and remained there for any length of time. So it was decided that when they set sail it should be for Apia, at which place the ladies would remain until the yacht would call for them on its return from Australia. This necessitated some changes in their outfit, as they would have to carry with them many articles from Cape Town that they had intended procuring at Melbourne.

The yacht was ready and the crew in first class condition a few days before Christmas. Then the

beautiful craft glided out of the Bay like a stately swan, saluting the British cruiser *Warspite*, at anchor in the channel, which the gallant Britons courteously acknowledged. For a time their course was almost exactly that of the *Katharine*, which was then to the northeast, somewhere in the Indian Ocean. Captain Jones often indicated on their charts the probable positions of the *Katharine*, much to the interest of the young ladies, though all were equally concerned in the welfare of the friends who dropped down upon them in mid-ocean at a time of need.

"Wasn't it remarkable," said Helen to Emily Williams, "how quickly they caught our farewell signal at Cape Town? You know it was simply an inspiration with us. No one had thought of using dear little Joe's code for anything else than a search-light signal, but the second time we repeated it, sure enough, they responded as though it had been an understood thing."

"Well, if it were not understood *then*, it seems to be pretty well understood *now*," said Emily Williams archly, "or at least it has caused some deep thinking." Did Emily suspect?

There was nothing more said then, but the great Indian Ocean was not wide enough to separate those

ships as they plowed their different ways.—After an uneventful run, the *America* reached Apia, from which place, when the ladies were comfortably installed, she left for Melbourne to remain for several months.

Mrs. Littell improved slowly yet surely under the influence of the sea voyage; this with the delightful climate of the islands gave Helen hope that she might return to New York when the yacht came back from Melbourne, although Dr. Peale had said it would require a year or more to effect a permanent cure and that it would be unadvisable to leave sooner.

Shortly after the *America* departed from Apia, a severe storm set in and continued for some days. There was considerable damage done to the shipping in the narrow harbor, and occasional vessels coming in reported the storm as having been terrific nearer the Equator, and there was no doubt of its having been accompanied by great destruction. Situated as were our friends, they could but anxiously hope for the safety of the *Katharine*, of which nothing could be ascertained in these remote islands. Helen spread out the chart she had so faithfully used for marking the supposed daily track of the *Katharine* up to the time of the arrival of their yacht at Apia. It was

with a feeling almost of dread that she found that the conjectured position of the ship would fall into the storm center of the typhoon.

"But," said Emily Williams, grasping at a straw of hope, "did Captain Jones make allowance for the difference in speed between the *America* and the *Katharine*, and might he not have unthinkingly given them too much mileage and thus placed them much farther north than they really were? You know the storm decreased in strength as it extended south," but the recollection of its awful fury even in their latitude paled her cheek as she spoke.

"No!" replied Helen, "the speed was taken into consideration and even the winds that might have proved contrary were allowed for. You know we sailed from Cape Town about a week later, but Captain Jones said that the *Katharine* must have met with head winds for some days and probably made slower time, although she could sail very close to the wind. He had this information from some of his sea-faring friends who came into the harbor while we were there, so, when we were about Longitude 60 degrees, they were not more than five degrees to the north and probably were meeting head winds almost to the time we arrived here, when they must have encountered the awful storm. Don't mention

anything of this to mamma. We will hope that all is right. If no accident occurred, I am not afraid for the ship for Captain Jones said there were none better afloat, nor were any ships better manned than those of the Red Cross."

"Yes! and I remember he also said in twenty-five years that he personally knew the line, they never lost a ship," said her friend, "so we will cheer up and hope for the best." But many days passed before they regained their spirits. No news came, and to them that was akin to good news.

CHAPTER IX

LEFT ON A BURNING SHIP

FOR days the *Katharine* crept slowly into the opposing wind which came steadily from the northeast. She was a good sailer and in the hands of Captain Duncan did all that a ship could do, but in spite of it all, they made but ordinary progress and so it went along for a couple of weeks, when there was a change in the wind. At first it veered around and blew directly out of the southwest, to the great joy of everyone on board, but it did not hold on more than one day when it proved fickle and turned around to the west and then gradually grew unsteady. Then Captain Duncan and Harry studied the barometer closely and frequently. It had been falling for six hours and was still going down. There was no doubt in their minds as to what was coming. Everything was made secure below and aloft. Low steam was kept up in the boiler of the hoisting engine so that the steam pumps could be put into action at a moment's notice. Now the wind

almost died out and left even the small sail that they carried, idly flapping against the mast. A sense of oppression in the atmosphere distressed the men, who went about their duties without a word. It was only a matter of a few hours at the longest when they would be fighting a powerful and relentless enemy.

Captain Duncan told his passengers courteously that, for their personal safety, they must go below while the storm lasted. With Joe's experience fresh in their minds, they had no desire to face a typhoon from the deck of the vessel anyhow. Dinner was served, but it was scarcely tasted and but little was said. When Captain Duncan arose he bade them good-by and added humorously:

"We may be used pretty roughly, but the *Katharine* will pull through all right, so don't be alarmed if you hear 'something drop'; it's a common occurrence in these latitudes."

About an hour later there was a shout on deck, then in few moments more the storm broke over the scene. The stanch vessel reeled under the blow, then, recovering herself, rose to meet the frightful tempest that was now howling through the rigging. The hoarse commands of the Captain were echoed by the clear tones of Harry's voice that could be distinguished even above the roar of the gale. Now

and then was heard the thunder of tons of water falling on the decks as a cross sea struck the ship that quivered as she tossed it aside. Below decks all this was combined with the groanings of timbers and the terrible poundings of the seas as they vented their fury on this creation of man that dared them in their own home. There was no rest in the cabin; the rising and falling and lurching kept our voyagers in constant action. At last Purdy said he was going to lie down, an example which the others followed. The storm seemed to increase in fury as the night came on. It was now getting terrible. The lightning, which had heretofore been intermittent, seemed to be almost one constant sheet. The thunder and crash of the discharges as clouds relieved themselves of their high electrical tension seemed to rend the heavens, while an almost blinding yellow glare opened to the eye a scene of turmoil and struggle of the elements that was frightful to behold. About sunset, although it had been very dark ever since the storm set in, Captain Duncan and Harry came down and threw off their sou'westers for a few moments to consult their chart, although they had anxiously hung over it at noon when an observation was made. Their position was carefully noted again, and with all allowance made

for the direction of the storm, they should now be within one hundred miles of the west coast of Java, but feared they would be driven far out of their course during the night, which had set in with no cessation of the storm.

Our passengers were making the best of it. There was no comfort in staying about the cabin nor any rest in their berths. At times there were thunderous reports as the struggling ship met heavy seas; then again some of the light sails blew out of their fastenings with a noise like an explosion. There was but little sail carried; simply enough to steady the vessel. So the fight was kept up until daylight, but with no abatement of the storm.

"It's a wonder we are not struck by lightning," said Joe, as a heavy crash seemed to tear the heavens.

"Ships don't get struck as often as one would suppose," said Mr. Purdy. "One reason for this is that there are a great many points, such as the mast heads and yards presented to the current and it really often does get struck as it were, but the force of the bolt is taken on so many places at once that the current is broken up and is harmless, yet it may strike, say our mizzen peak. If it did, we should get the full force of it right here in the cabin where

the mast passes through the deck, or there may be a divided flash coming down the main and mizzen masts at one time. For some reason or other there are no lightning rods or conductors on the main or mizzen masts of the *Katharine*; I noticed that some time ago."

"How can you tell how far a bolt is away from us, as you have done several times during the storm?" said Joe.

"Well! when we see the flash, then begin counting the seconds that elapse until the report or roll of thunder is heard; we have but to remember that each second means that it is about a fifth of a mile away; in reality it is a little farther than that, as sound travels 1142 feet in a second, and there are 5280 feet in a mile. When we see the flash, and almost instantly hear the report, or the thunder, then it is very close."

There was but little breakfast eaten that morning. The crockery would scarcely stay on the ship's table. Captain Duncan turned in for a few hours' rest, intending to relieve Harry at noon. On account of the danger on deck none of the cabin passengers were permitted above as yet. At noon Captain Duncan again went on deck and tried to take an observation, but it was impossible with that

angry sky overhead. Just as Harry turned to go below, there was a cry from the lookout that there was a sail in sight. A flash of lightning showed for an instant a large, three-masted vessel like the *Katharine*, struggling with the tempest, about a mile away.

"Too near for comfort!" shouted Captain Duncan, and then ordered signals to be burned to notify the stranger, who returned them as best she could while rising and falling on the heavy seas.

Harry came below with the news, but said, as yet, they apprehended no danger from the other ship, as there was still considerable sea room and each was on the lookout for the other.

"What bothers us most," said he, "is our position. We haven't had an observation for over twenty-four hours, and it will be another day before we can take one, even if the storm permits it. We have an eastward drift, but it is very slow, so there will hardly be any trouble to-night on that account. It's our neighbor over there that we want to avoid. Call me at six o'clock. I must be on deck again to let Captain Duncan have a little rest."

Amid the howling gale and fearful lightning, the young mate slept until evening like a child in its

quiet home. He had scarcely gotten ready to go on deck when he was called to come quickly. The sight he beheld was almost enough to make one quail. Right abreast of them, and not more than five hundred yards away was the strange ship battling with the storm. It was not necessary to burn a signal now. They saw each other only too well in the little daylight that remained, for the dark, dreary day was just closing.

“They may yet drift across our stern,” said Captain Duncan. “If we thoroughly understand each other, we shall avoid a collision. It will be a risky thing to make sail in this blow, but one or the other must do it. I think their captain knows it must be done here, for his foremast is broken off short, but still he appears to be able to manage his ship so far.”

For the last few minutes the wind had been dying down, and now there was a rift in the overcast sky in the southwest, throwing a strange light over the struggling ocean.

“Mr. Henderson, call up our passengers!” said Captain Duncan, “this break won’t last long. We want them to know the situation while it is light enough for them to see!”

There was a deadly stillness on the *Katharine* now;

the wind had gradually died away, leaving the ocean in an angry turmoil, but the lightning had not ceased its vivid play, and was still adding a startling effect to the scene presented to our three voyagers when they came up to the deck. The strange vessel was drawing a little closer, and now that the wind had fallen, she was unable to check her slow drift through the mighty seas.

“Do you think she will strike us?” asked Joe.

“Well, that’s hard to tell now,” said Harry. “There’s some sort of a current setting this way that has brought her nearer than she was this morning, although we are drifting also. We don’t anticipate any danger just yet; still, with the high sea, and the hurricane liable to come back on us at any moment, it is not desirable company, especially as night is coming on.”

“What nationality is she?” asked Frank, gazing at the ship that was still plainly visible.

“English! and very likely to be bound for the Cape or Australia. We have had them in sight for some time, and have been struggling against the storm together.”

By this time the sun had almost gone down, but the vivid lightning showed the other ship to be in about the same position. Captain Duncan went

below with the party, leaving Harry in charge, with instructions to call him if any change took place."

Aside from a few hard knocks from heavy seas coming aboard, the *Katharine* had suffered but little, but there had been no observations taken since the storm set in, and this, coupled with the fact that they were driven considerably out of their course, gave the Captain no little concern. The night closed in with some abatement in the tremendous seas that were tossing the large ship like a toy. About an hour after sunset, Captain Duncan was hastily summoned to the deck. The stranger was only a few hundred yards distant now. It seemed as if some magnetic force were drawing the ships together, so persistently did they near each other. They could now hear the loud commands to the other crew, who were righting the damages made by the broken foremast.

Not a word was spoken. All seemed to realize their dangerous position as they stood there watching the approaching ship.

"It seems to me that she is drifting a little more to the stern, or we are forging ahead some," said Frank, finally, as a flash of lightning showed her position.

"Yes! she is," said Harry. "We shall clear her all right if it keeps on."

The ships were not more than a hundred yards apart, but the stranger gradually worked sternward as she approached.

"What ship is that?" shouted Captain Duncan.

"The *Meteor*! bound for Melbourne, two days out from Batavia," was shouted back.

"I think we shall clear all right now," said Captain Duncan, "but it was a close call, and the danger is not all over yet. If the wind rises we are still too close for safety; the lull can't last much longer. It is a peculiarity of these East Indian hurricanes and typhoons to suddenly blow out, for a period varying from a very short time to half a day, but this will come back at us."

The sea had gone down somewhat, but by nine o'clock that night the storm again set in with redoubled fury. The *Meteor* had drifted about a mile to the southwest. With occasional signals it was seen that there was no immediate danger and so another rough night was passed, but with the renewal of the storm came the lightning, which had lessened somewhat as the wind lulled. The following morning the *Meteor* could be discerned several miles distant, bearing up against the furious gale and

seemed to be laboring hard. Suddenly a bolt of lightning fell on the *Katharine* with a report like the discharge of a cannon. Streams of fire flashed down the main and mizzen masts. For a few seconds there was heard only the sound of the storm, then arose a cry from some of the men that Captain Duncan was killed. He had been standing near the mainmast at the time the bolt descended. Harry was on the spot immediately, with him Mr. Purdy and Frank, who hurriedly came up from the cabin followed by Joe, who appeared completely dazed.

“Has he been hurt, too?” cried Harry.

“No! but we were all shaken up for a little time. I’m afraid the charts are destroyed,” said Frank, as they were carrying the Captain’s form to the rear. At this juncture one of the men came hastily to Harry, and reported that there was fire in the hold near the mainmast. Leaving Frank and Purdy to care for the still insensible man, Harry, who now assumed charge of the ship, hastened to the waist and found that there was evidently a fire below. A thin column of smoke was ascending from the small rent torn through the heavy deck by the lightning. A hose, already attached to the steam pumps, was put into play through the opening, as the seas were still running too high to attempt taking off the

hatches; then turning his attention to the Captain, upon whom Purdy was still at work,—

“Is he dead?” he asked anxiously.

“No; I think not,” said Frank.

“His heart is beating faintly, I think,” said Purdy. “It may simply be a case of suspended animation. He doesn’t show a sign of a burn. There’s no doubt in my mind that the current only stunned him. It certainly did not traverse his body.”

“The fire is getting worse, sir,” said the second mate to Harry. “Better come forward and look at it.”

It was indeed beginning to look serious. As a last resort, the hatch was ordered off, and the hose turned in with all force, but without avail. It was closed again and a wet tarpaulin placed over the damaged spot to exclude the air. It was evident that the good ship was in a serious position. A raging storm without, a slow fire within. The outlook was one calculated to try the soul of the young commander. Calling men who could be spared, he ordered them to make another effort with the fire hose. While this was being done, Harry hastened to the cabin for the second time, and assured himself that there was no fire there. Joe was at work arranging the charts, some of which were almost completely

destroyed, while others had been scattered around in wild confusion.

The bolt had followed the floor to the stern, and then along an iron stanchion to the outside, where it probably gained the sea. On deck again, Harry, finding there was nothing to be gained by using the hose through the deck, called for volunteers to take the stream below. There was a ready response from the crew, but only two were hastily selected. Fastening ropes to their waists and placing wet sponges over their nostrils, they jumped down into the cargo. For a full minute they fought the fire that was eating its way into some inflammable material under the deck; when suddenly both staggered, being overcome by the smoke, and were hastily withdrawn from their danger. Again the hatches were tightly closed, for the fire seemed to grow worse with the incoming fresh air. The seas that had at times washed the decks would have been welcomed now, but the air must be shut off. It was at last decided to abandon the *Katharine*. There were three boats on the ship, two long boats, capable of holding twelve men each, and one smaller boat that would carry six men. These were gotten ready as speedily as possible, with provisions and water aboard. While this was done, signals were made to

the *Meteor*, which was yet in sight a few miles away.

The sea was still running very high, yet it was not so violent as it had been at dawn, nor was the wind so strong, but with all this, the prospect was gloomy indeed. Captain Duncan, disabled, if not dying, would have to be carried into a boat to be launched into that angry ocean. Everything was done quietly, with the coolness that characterizes a well-disciplined crew. The lookout reported that the *Meteor* was responding to the signals of the *Katharine*, just as the first boat was ordered to be launched. This was accomplished in safety, though at considerable risk. Then the next boat, in charge of the second mate, was gotten off, narrowly escaping being crushed against the ship's side by a heavy sea. Captain Duncan was taken in this one. Through the prompt and effective measures taken by Mr. Purdy, who had hardly left him since his prostration, he had so far recovered as to be able to move his limbs, but was still helpless. Tears came to the eyes of the men as they carried him to the boat, that was now on its stormy way, out of one danger and into another. As the boats left, the men bid good-by to their young commander, whom they knew must be the last one to leave the ship.

The latter, with Andy, who begged to remain for the small boat, was the only member of the ship's crew remaining.

Both Frank and Mr. Purdy were good oarsmen, but Harry had counted on carrying a small sail to help them after once clear of the ship. Not a word was spoken, except an occasional order in regard to the preparation for the launching. Andy held the wheel, keeping the ship's head to the sea, awaiting the final order to secure it and join the party. Harry was taking a last look at the shattered opening near the main mast through which, in spite of all that could be done to close it, the smoke was coming rapidly. As he turned to go he felt a hand on his shoulder. Frank was at his side.

"Harry, my boy!" said he, "is it not enough that one disaster after the other has overtaken us, that you should add sorrow to them, because we are with you in this trouble? I want to say it right now; for when we are out on that raging sea I probably cannot; that I would rather be with you in this time of peril than to be walking the streets of Brooklyn in safety and alone. You have not shown it, but I know that even in this supreme danger, your heaviest care has been for the safety of those who are in your charge. With God's help, we will pull

through yet, I know it.—Now, you may be commander again;”—then with a clasp of the hands that meant more than words could express or tongue could tell, the two parted for the moment.

There was another passenger on the *Katharine* whose name was not entered on the ship's books, but now that most of the company had left the burning ship, he came more into prominence on account of his dependence on his human friends. It was a dog belonging to the crew, which had picked him up at Cape Town, and with the officers' consent, had brought him aboard. He was of no particular breed, but seemed to possess more than ordinary canine intelligence. The crew had already taught him several amusing tricks, in the short time they had had him. Joe was positively fond of Toby, and now that the dog was again allowed on deck, he followed his young friend around closely, showing by every action that he knew the danger they were in. At Joe's solicitation, it was arranged to take the dog into their boat, which was now ready. Ordering Andy, who was at the wheel, to lash it fast, so as to keep the ship to the sea as long as possible, Harry gave the order for all to assemble quickly, for the dangerous work of launching, and following the other two boats, that were struggling out on the

angry ocean, now on a wave, now in a watery hollow, from which, it seemed, they might never rise again. Suddenly there was a ringing cry from Andy to look out for a huge sea much higher than had been running that came charging in from the ocean, taking the vessel on the port bow, catching in its wild rush the boat on its davits, crushing it like an egg shell, deluging the decks in the wild watery rout that followed. Scarcely had there been time enough for all to escape from harm, but drenched to the last thread, they saw their hopes dashed to the winds. As if to survey its cruel stroke, there was a momentary lull in the tempest, during which not a word was spoken, beyond quickly ordering Andy to the wheel. Toby tremblingly sat looking into Joe's eyes, as if he well knew their desperate situation, when suddenly a rat that had come up from somewhere below, scurried along the deck, and true to his instincts, Toby rushed after him, losing him in the galley that enclosed the boiler of the hoisting engine.

In spite of their predicament they followed the dog with their eyes, as he disappeared in full chase of the rodent, but the incident, ludicrous as it was, seemed to direct them into a channel that eventually led to the saving of the *Katharine*.

“Why can't we use steam?” cried Frank.

“Steam for what?”

“For extinguishing the fire.”

Mr. Purdy grasped the idea at once. In company with Frank, he was in the boiler galley in a moment. With Harry's aid the necessary tools were found and at once Frank began disconnecting the pipe running from the blow-off cock to the vessel's side. With good pipe tongs this was done in a few minutes, then, with a large auger, a hole was bored through the planking separating the galley from the hold; through this was thrust a piece of the pipe just taken out. This was again connected to the boiler and the blow-off was opened, the steam and water pouring into the burning hold, instead of going out of the side of the ship. With a roar like a mighty torrent it thundered into the vessel's hold, under a pressure of over a hundred pounds to the square inch, penetrating to the uttermost corners of the structure. Then it began working out of the smaller openings from which the smoke had been escaping, some coming back through the galley, enveloping it in a thin white cloud. So the two elements, fire and steam, fought for the mastery within, while the tempest raged without. One, two, five, ten minutes, the thunder kept up, then it gradually ceased and was quiet. There was no more smoke, or anything to indicate

that there was fire existing in the hold now, yet it was deemed prudent not to raise the hatches to make an examination for about an hour, during which time the boiler was again filled by the hand pumps, and fire once more put under it for further emergencies. During this time the boats had gone so far to the south that they were barely visible. With a prayer on his lips for their safety, Harry assisted the rest to remove the hatch. A dense steamy air poured out for a moment, after which Harry descended to make an examination. Not a sign of fire existed; all had been extinguished before any of the vessel's timbers were even scorched, but in another hour it would have been beyond control, as it was just attacking a lot of light and combustible furniture consigned to Manila and Hong Kong. When Harry came up and reported that there was no further danger from fire, Joe hugged Frank and wept for joy, while Toby, who seemed to comprehend his part in the work, capered around the deck after Joe, who rushed back to the wheel to tell Andy the good news.

“Ich hops gewisst!” said Andy, shaking his head knowingly, forgetting in his excitement that Joe did not understand Pennsylvania Dutch. “I see dem do de same sing up in de coal mines where I once work. I know Mr. Frank will do it when he commence!”

"But," said Joe, "we mustn't forget that Toby kind of put us on to the idea;" then, giving the dog an affectionate pat on the head, he ran back to assist in relaying the open hatch.

The afternoon had now advanced into early evening, with some abatement in the storm. The boats had gone out of sight, nor was the *Meteor* to be seen. Frank Miller looked out on that black, stormy sea, and thought of the brave men struggling there, if they had been spared thus far; then with a silent prayer in his heart for their safety, he saw how miraculously those he loved dearly as life itself had been saved from a terrible fate. Though the dangers of the sea still confronted them, he realized a Providential hand had cared for them through it all.

CHAPTER X

A MIRACULOUS ESCAPE

MR. PURDY acted the cook that evening. He soon had a good supper ready, after he once got the run of the cook's galley, but he could not forbear commenting on the cumbersome ways of modern cooking when compared with the light, elegant and more effective methods that would be afforded by electricity. After the meal, Harry relieved Andy at the wheel, sending him below for rest. From all appearances the storm was gradually decreasing in fury. About midnight, Frank, who was on the lookout, came back to the wheel, and pointing to the leeward, asked Harry to watch for the next flash of the now distant lightning. There was something in that direction, but he could not make it out. Harry scanned the waters as best he could by the intermittent flashes, but could only say that there was something there, whether land, or clouds near the horizon he could not determine; at all events, there was nothing to fear for the present.

Having called Andy about an hour later, he walked forward with Frank to keep watch, well knowing the risk they were running as they drifted almost blindly before the wind in an unknown sea. Just then another flash illumined the scene, when right before them stood a headland towards which the *Katharine* was steering, utterly unconscious of its proximity.

“Port your helm!” cried Harry, and the ship evaded the danger like a living thing. They could now hear the distant roaring of heavy surf on the port side. Another sheet of light showed them running almost parallel to a shore that towered high out of the water, against the sides of which the sea rolled in impotent fury. Hastily running below, Frank woke up Mr. Purdy and Joe, so as to be ready in case the vessel struck, a catastrophe that might now occur any moment. Then there was a cry from Andy—

“Breakers to the starboard!”

The situation was indeed desperate. Land on either side of them, a driving ocean behind them, and Egyptian darkness, now and then relieved a little by lightning, covered them as with a pall. Would the noble ship at last meet with destruction after running a gauntlet of fire and tempest? It was

now apparent that they were moving between lines of breakers, but of their extent they could not even form an idea. Harry summoned all to the wheel, and, in a few words, told them to prepare for the worst. That there was yet deep water ahead was evident, but how long it would continue was a dreadful uncertainty. Guided only by sounds, not daring to drop their anchors even if so disposed, the brave little crew waited with calmness the awful end. Again in that trying moment Harry felt that strong hand and heard Frank Miller's words of cheer and hope. They saw that they were drifting through some dangerously narrow channel now, for the sounds of breakers was gradually being left astern and then; in one more minute, the *Katharine* was riding in smooth water. Hastily casting the lead, they found deep water, while another flash showed it clear again on all sides. The wind no longer drove them, and the ocean, that thundered on some distant shore, no longer threatened them. The anchor was let go with a rush and the *Katharine* was at last in a haven of rest.

CHAPTER XI

A SAFE HARBOR IN AN UNKNOWN ISLAND

A DOME-LIKE elevation that almost aspired to the dignity of a mountain, with its one side gently sloping down in the northern distance; covered with tropical verdure from its crown to its base; was just being touched by the golden rays of an equatorial sun. Down the sides the light crept until it shone on a peaceful shore at the foot of the eminence, extending for miles to the north, forming one side of a long narrow sheet of water about two or three miles in width, separated from the ocean by a series of narrow, low-lying islands, against which, on this beautiful Sabbath morning, the ocean was pounding in a long muffled roar; the surf, at times, flying high into the air like jets of mighty fountains. Not a sign of a human habitation was in sight anywhere along that beautiful land-locked bay. Here and there were indentations into the main land in which a ship might lie secure from any tempest. Near the southern end of this great harbor, and just opposite the foot of the mountain, lay the *Katharine* safely at

anchor. Not a man was seen moving about her decks even at this hour. She seemed as if asleep and resting after the race of life and death of the past few days. Farther to the south, and about a half-mile distant, the high land curved around toward the sea until it almost met the chain of islets that made the seaward side of the bay, forming a narrow and difficult passage, apparently not wide enough for a ship to pass in safety. Through this narrow inlet a Guiding Hand brought the *Katharine* as by a miracle, in the darkness of the past night. The sun was high in the heavens before there was anyone astir on the ship. Harry, who had stood watch until sunrise, when he saw that all was safe, did not think it was necessary to disturb the sleep of the others who had gone through the strain of the past few days; but quietly turned in for a much needed rest.

It was not until noon that all assembled on deck, where Harry read the church service and all devoutly joined in prayer for the safety of their friends and in giving thanks to Him who holdeth the sea in the hollow of His hand, for their own almost miraculous deliverance from the jaws of death. Again Mr. Purdy acted as the cook, fairly outdoing himself in getting up a dinner for the hungry crew. There was

soup, fresh fish, fine canned meats and vegetables, followed by excellent tea. It is true that some of these were almost ready for the table, but his genius was shown on the fish that Andy had caught, and which was pronounced excellent by the company. Aside from only what was absolutely necessary, not a stroke of work was done; that Sabbath was made a day of rest, for there was much to do on the morrow. The ship must be made secure, then the island (if it were an island), must be explored for any possible traces of their friends, first of all. As they sat together that lovely evening, talking over the events of the past week and of the work before them, mention was made that the only boat they possessed now, was the small dingy, when a larger boat would be so necessary.

“But we have another!” said Joe confidently, “we have the yacht in the cargo, and you remember the party who shipped it regretted that we could not have a chance to try it before stowing it away.”

It was a fact that had been overlooked. There were also three barrels of naphtha sent with it, securely packed, so as to avoid accidents. The shippers sent these for the trial trip, and wanted to be sure of a good article. This was stowed away on the upper deck out of harm's way. Joe's suggestions

to use it were hailed with joy, and arrangements were made for next day to get the yacht out and have it put into running order. After breakfast the following morning steam was raised in the boiler of the hoisting engine and all the hatches were lifted from their fastenings. An examination showed that the lightning, after passing down the main mast and tearing a hole in the deck, had set fire to some bales of carpet stowed at this point. These were almost consumed; then followed a lot of crockery in straw packing; this, too, burned slowly in the confined hold, but the fire had already commenced an attack on a lot of light furniture. Here it was checked just in time to prevent the total destruction of the vessel. While the débris was being cleared out (which took but a few hours) Mr. Purdy was speculating as to the course of the bolt of lightning after it reached the interior. "For," said he, "if it had passed right down through the hull into the sea, there would have been more or less of an opening torn in the bottom of the ship, creating a leak, yet the pumps showed that not a drop of water had entered. There is not a sign of a rupture anywhere, in fact here is the last trace of it," pointing to the seam made in the side of the mast. "It tore a ragged channel like this, which is so deep that we can

lay a finger into it, from the main truck to here, and then disappears."

"Der alt dunnerwetter may be bruttzling around yet in de corners of de schif!" said Andy, raising a hearty laugh at this quaint way of putting it. Purdy finally conjectured that it must have found its way through a lot of brass covered curtain poles among the cargo; and from there into the main hold through various metallic articles, which conducted it into a large lot of steam pipe, where it was finally dispersed and eventually found its way seaward.

"Then we must have been on a kind of a floating Leyden jar for a short space," said Frank, with a laugh, "and Andy was not so very far wrong after all."

By this time the hold was put into shape again; the damaged goods were hoisted out and everything useless was thrown overboard. Their attention was then directed to the electrical machinery which, thanks to its secure packing, had not suffered either from the water thrown into the hold, nor from steam and hot water from the boiler, and the cargo had suffered very little as a whole. The naphtha engine for the yacht was hoisted out on the deck, where Frank took charge of it, and soon had it in order, there being explicit directions attached for

its use and care. Then slings were fastened to the boat itself, which came forth from its snug crib to the outer air and was deposited on the deck, where it was blocked into position temporarily, prior to being lowered into the waters of the bay. It was a beautifully molded craft, the hull being built of light steel, thoroughly covered with a pure rubber paint to prevent corrosion. The propeller, of the latest design, was made of bronze. As the engine always runs in one direction, the boat was backed by an ingenious arrangement of the propeller blades, which were reversed by a simple movement of a lever, while the engine was running. In the bow was a cast iron reservoir for naphtha, holding enough to run forty miles. As the power was generated in the cylinder, where it was used, an electric spark was necessary to ignite the naphtha gas. This was accomplished by a two-cell battery, having a spark coil in circuit.

There was every convenience for passengers, of which it could readily carry eight or ten with ease. Joe was delighted with the handsome little pilot wheel, which was placed at the forward end, along with an electric switch used for starting and stopping the engine, which could also be controlled from the rear if desired.

The trim little craft reached the waters of the bay in safety, on which it rode like a duck; then the engine was sent down and placed in position by Frank and Mr. Purdy. On either side of the bow, in neat letters of brass, appeared the name "Edna," the yacht no doubt being called after someone in the family of the party to whom it was consigned in Manila. It was three o'clock in the afternoon before the *Edna* first turned her wheel to make a trial trip preparatory to her errand of mercy the following day. Accompanied by Frank, who took frequent soundings as they went along, Harry ran in near to shore and then, turning to the north, followed the middle of the bay to the extreme end and then skirting the islands forming the barrier between the ocean and the bay, they returned to the *Katharine* after an absence of about three hours.

"She works beautifully; a child could manage her!" said Harry. "We went the full length of the bay and were out on the ocean for quite a distance to test her thoroughly. I am now convinced she can be used with safety in an ordinary sea. On our way up we stopped at the islet forming one side of the entrance from the north. On it we found thousands of eggs of sea birds and have brought along a few dozen. These outlying islands must be full of them,

but not a sign of a human being is to be seen anywhere from our point of observation along the shore."

Evening had closed around them with the characteristic suddenness of the tropics, when the whole party gladly obeyed Mr. Purdy's call to supper, which was now ready. Then plans were laid and debated for the morrow. There were many things to do but it was felt that the first duty was toward their missing comrades who might be wrecked or had drifted to those shores.

"I think we are on an island," said Harry, "from the fact that we are now on the eastern shore of this land. Were it the western shore it might be some part of Java or Sumatra, and it certainly is not India. We cannot tell the exact latitude, nor the longitude; our instruments have been lost in the boats. Fortunately we have three fine watches that have been kept running and they still agree. They were set at Cape Town on the time of the Meridian of Greenwich; from these we may get somewhere near our longitude, and we can also approximate our latitude, but that is a matter that can wait. We will explore the coast as far as we can to-morrow and continue until we have made a thorough search for our men."

CHAPTER XII

DISCOVERING NATURAL TREASURE

THE morning dawned bright and beautiful and there was a gentle breeze coming in from the sea, scarcely ruffling the waters of the bay. At seven o'clock the *Edna* was ready for her errand of mercy. Harry and Frank only were to go, leaving the care of the vessel (and there was plenty to do) in the hands of Mr. Purdy and the rest. The yacht carried a two-days' supply of water and provisions, with such articles as might be needed in case they found the shipwrecked men. Then there were two good repeating rifles and a pair of revolvers taken along for emergencies, which they sincerely hoped would not arise. Bidding the rest good-by, Harry steered the sprightly boat toward the south entrance through which the *Katharine* drifted that awful night. They found the channel plenty deep enough for a large vessel, but so very narrow at a few points that Harry saw at once they could not get the ship out again without the assistance of a large crew,

and even then it would be fraught with danger, there being sharp, needle-like rocks projecting along the straitened passage for some hundreds of yards. Nothing was said as they mutely observed the terrible gauntlet through which the ship had run. After clearing the passage they came out on the open water with the high, cliff-like shore to their right. They ran along this for about a mile, when they found it was a headland rounding off toward the west. This they recognized as the first land they sighted when they were driven before the storm.

Rounding it they found an open bay on the western side formed by the rocky cape they had just doubled and the southern shore of the island. Following the shore closely and searching for any sign, they made their way westward. When they had left the cape about three miles behind them they observed the mouth of a stream that entered into the bay at this point. It was about two hundred feet wide, presenting a singularly calm appearance for some distance out from shore.

“Look here!” said Frank, pointing to some large iridescent patches floating on the water, “that looks like oil.”

“I think it is oil!” said Harry, “and to my mind that is what makes the water so calm here.”

It seemed to be floating out of the creek across the mouth of which they were now passing. They sighted it inland as far as the first bend, when it was lost to view, and then proceeded on their way to the west. Thus far they had not seen one sign of life along the shore, except vast numbers of birds of different kinds. They remarked the absence of fear among them as the *Edna* passed along near to their haunts, showing that man was a new creature to them and was not to be feared. They could now look back across the land to the mountain which had not been out of their sight since they rounded the cape. It was estimated that the distance run thus far was about eight miles, but as the shore was unknown to them it was necessary at times to run slowly, so that it was not until noon that they passed the creek. This part of the island was open country that seemed to stretch inland for a few miles, revealing large and beautiful stretches of grass-covered land, dotted here and there with groves of tropical trees, some of which stood so near shore that they were easily recognized as the cocoanut tree.

Further inland the ground rose somewhat and was apparently a vast forest as far as the eye could see. On the west coast they found that a rocky side of the land rose out of the water to a considerable

height and did not, at most places, show more than a few feet of beach, presenting a most inhospitable appearance. As the afternoon was drawing to a close and there appeared to be no safe anchorage along the coast, they determined to run back to the creek on the south side and anchor for the night.

In order to save fuel, Harry had rigged a small sail for the yacht that could be used in a fair wind. This was spread and the return to the creek was made almost as quickly as they had come out. Reaching the mouth, they proceeded inland running with great care until a suitable place was reached where they anchored off shore for the night. The yacht was evidently intended for trips of this kind and she was well fitted for the work. Under the seats, which were really capacious lockers, was everything needful for camping or anchoring out for any length of time. In addition to this there was stowed out of sight a water-proof cover for the entire boat in case of a heavy rain such as would be met in the tropics. After supper they talked quite a while over their plans and then, after a short prayer for the safety of absent ones and with thanks for the care of the day, they made beds from the comfortable cushions and turned in for the night, sleeping in safety until sunrise.

Breakfast over they passed swiftly out of the creek with the tide, intending to complete the circuit of the island, if possible, that day. They found the same rocky coast extending all along the west side of the island commencing at the meadow lands in the south. There was absolutely no landing place along the west coast except at the southern end. Continuing along the northern side of the island they found, with a few exceptions, the same forbidding shore. The yacht was now approaching the narrow passage at the north end of the bay and once inside they would sight the *Katharine* lying at the other end, having made a complete circuit of the island during which they had not seen a trace of the missing crew along the coast. About noon they arrived at the inlet through which they had been on the *Edna's* trial trip. In a few moments they sighted the ship safe at anchor about six miles away. Continuing along the inside shore line they stopped for a little while to examine another creek entering the bay from the interior.

"This will be a splendid place to anchor the ship," said Harry, "here is fresh water, a good landing place and plenty of depth."

Following the stream inland for a half mile it was suddenly brought to an end at the foot of a

series of cascades, the water pure as crystal descending from a considerable height from some elevated source. Leaving this they again ran out into the bay where they were sighted by the crew on the *Katharine* who waved them a welcome as they approached, having been gone about thirty-three hours. "We have not found a sign of our friends nor have we seen a living thing along the shores of the island except birds," said Frank. "We now know we are on an island having a shore line of about fifty miles with a forbidding coast on the northern and western sides. If our friends have, in God's Providence, landed here, which in the light of our exploration seems improbable, they must be in the interior."

"We will try again to-morrow," said Harry, "commencing at the mouth of the creek on the south side, running in as far as we can. I do not think it well to make a land exploration with less than three in the party and then Toby may go with us; he will prove a good member of the expedition, I think."

The dog looked up and wagged his tail when he heard his name mentioned and looked as serious as if he understood the whole situation. So it was decided that Mr. Purdy should accompany the boat

while Joe and Andy took care of the vessel. Considerable work yet remained to be done about the ship. The sails were let down and dried; the disorder left by the storm in many ways was being repaired and a lookout was kept seaward for any sail that might pass in sight. Again next morning the *Edna* plowed her way out through the narrow channel and rounded the cape, standing for the creek which was entered with the tide that had just turned. Carefully feeling their way, they passed their anchorage of the night previous, arriving at the first bend in a short time. The mountain here lay about three miles northeast in a direct line. The country, which was open and grass grown for a half mile from the mouth of the creek, was dotted with palm trees of all varieties, many with fruits, among which Harry recognized the date palm and the sago palm. Cocoanut trees loaded with nuts were seen in abundance as the boat slowly moved in. They still had plenty depth of water at a distance of nearly two miles from the mouth. The creek had gradually narrowed down in width to about fifty yards between banks, showing a depth of eight feet. The oil sheen seemed to be confined to the west bank now, which showed that whatever it came from was not far away.

“There it is!” said Frank, pointing to an opening to the left. It’s coming in from another smaller creek that joins the main stream at this point.”

“I think it’s an oil stream,” said Mr. Purdy, “it looks like the Allegheny River in Pennsylvania after passing through the oil country.”

The substance certainly looked like floating petroleum and now that the tide was on the turn it filled the narrow tributary from side to side with its rainbow hues.

“We will go in there when we come back,” said Harry. “We don’t yet know how far we can go up this main stream, which we must do on a rising tide when we get nearer to its source.”

Thus far nothing was seen to indicate the presence of human beings. As they advanced into the forest, the trees were alive with birds of brilliant plumage; shrill screeching of parrots mingled with songs of birds unknown to our voyagers. Then the deep drumming of pheasants came booming through the trees; now and then, as one rose to take wing, the roar of its flight would startle all except Frank who well knew their habits. More than once he wished for his favorite breech loading shot gun. Yet with it all, at intervals there was a deathly still-

ness in the forest, not another living thing of any kind had been seen.

“If there are any four-footed animals on this island one reason why they should not roam around here would be the water. They probably would dislike that oil taste, and naturally would keep farther to the north,” said Mr. Purdy. “There must be six or eight miles of forest land between us and the north side of the island, affording ample feeding ground for a colony. As far as I am concerned I feel far more interested in that oil matter back there than in anything this country can turn out in the menagerie line.”

They were now moving through water as clear as crystal; beneath them they could see numbers of fish darting about over the hard, gravelly bottom, which was gradually getting nearer. The influence of the tides at this point was such that they might advance for another mile with safety, but it was painfully evident that their search would not be rewarded by any trace of the missing crew.

“I am now convinced they are not on this island, and had my doubts on that point before we made our first trip,” said Harry. “You remember the last we saw of them was when they were about two miles to the south. It was just about the time that

the steam made such a commotion and was showing itself outside of the decks for a moment or two during a temporary lull in the wind. They were then trying to make the *Meteor*, which had responded to our signals."

"Let us hope they did," said Frank.

"If they reached her in safety there will be some sad news cabled from Melbourne to New York!" said Mr. Purdy. "I wish,—I hope my——" And the usually imperturbable man buried his face in his hands, leaving unfinished the sentence which the others only too well understood.

They had seen his lovely wife and little daughter on board a few days before sailing, looking at the vessel in which their dear one was to journey so far away. They had noticed the childlike affection that existed between the members of that little family. They, too, had seen that devoted pair wave a last adieu from the landing stairs at the Battery, as the tug left there to reach the *Katharine* that was then passing out, and then as that party reached the deck they saw a rapid interchange of signals made across that water by the motion of the hands, telegraphing through space silently and quickly the last words of farewell and love. Ever since the almost miraculous escape of the *Katharine* from

destruction they had been busy, still having much to do, and so did not give any thought to the outside world, but now in the stillness of that lonely forest the thought came home to them that the dire news must sooner or later reach New York, telling that the ship was destroyed by lightning, burning in the height of a hurricane, passengers and part of crew lost. They realized the effect of the sad news upon their friends, and all this would come to pass within the next few weeks and they would be unable to prevent it.

No wonder now that the man of iron nerve buried his face and groaned aloud. He, whom they had seen standing on the deck only seeing tremendous energy going to waste in the angry lightning bolts, when the very crew stood in silent awe, or when waves of extraordinary height threatened the vessel, it was only their dynamic force that was noticed by this man, cool and at ease in the most trying situations, his nerve never failing him; now at the thought of the dire intelligence that would inevitably be flashed under the very ocean to the dear ones at home, Robert Purdy for the moment was overcome.

For a while there was not a word spoken; the *Edna* was again headed down stream, there being

now no reason for continuing any further. The remainder, if necessary, could be done at some later period. In a short time they reached the incoming creek from which came the oil-covered waters. There was no reversion to the painful subject that had been uppermost in their minds a little while back. Harry steered the boat into the narrow waters, almost too narrow for navigation, but with sounding stick constantly in use, Frank found water enough for safe running for some distance, when suddenly he called out—

“There’s our oil spring!” And right ahead of them they saw descending the rocky bank of the creek a stream of brown colored liquid which they at once recognized as crude petroleum. They had detected the heavy, gaseous odor in the air as they approached it. Fastening the boat to the bank, they ascended it a few yards to the top and beheld a sight that filled them with astonishment. A circular pond of about twenty feet diameter lay before them, filled almost brim full of crude oil of a brownish cast. On the side nearest the creek, it had found its way through the stone until it apparently had worn a singularly regular opening and then flowed in sheets into the creek. Almost in the center there was a boiling similar to any other

spring. Frank inserted his sounding rod and found a depth of about four feet when he stood. While he was doing this Mr. Purdy measured the size of the stream at the overflow, estimating that there was escaping at least five gallons a minute; counting fifty gallons to the barrel would make about six barrels an hour, or say in round numbers one hundred and fifty barrels a day, which was probably a very moderate estimate. How long this wonderful flow had been going on they could only conjecture. Perhaps for ages and they may have been the first human beings that ever saw it.

“If the ‘Standard’ knew this they would have a branch pipe line put in at once and be giving us oil certificates instanter!” said Frank. “Now Mr. Purdy, you who would economize wasted natural forces of sky and sea, here is something more tangible to work on.”

“True!” responded he, “here is an enormous waste, but one thing I do see, that is, we will not need for naphtha or gasoline for our little craft now. We can easily make a still if it’s necessary, and do some oil refining on our own account. We have all the necessary pipes and material on the ship, although at our present rate of consumption, what we have will last quite a while.”

For some distance around the spring, the ground was destitute of trees or undergrowth, while to the north of them a distance of about a hundred yards the forest began stretching away up the slope.

"No wonder the bay on the south side of the island is so smooth, and yet it could have led us to destruction had we drifted in there, for you notice there are scarcely any breakers falling on the shore like on the east of the Cape where they roared so loud that night," said Harry.

"I want to take a sample of this oil back with us," said Mr. Purdy, running down to the yacht for a small bottle he had seen in one of the lockers. Filling it, he remarked that it had a remarkable body, the finest he had ever seen.

"This spring in Pennsylvania would be a fortune to the owner," said he, "and that reminds me, Harry, that we haven't as yet taken possession of this island in the name of Uncle Sam."

"Which we will do to-morrow, with all due ceremony!" rejoined Harry.

"I guess there's no necessity for putting up a sign 'No Smoking' here, is there?" said Frank, and added, "I don't see any danger from fire."

"If it did take fire," said Mr. Purdy, "there would be a sight that would astonish the natives, if

there are any, and besides that it would be a pity to see it go up in fire."

"Just as if it wasn't running out to sea all the time," responded Frank slyly, as they turned for home.

CHAPTER XIII

TAKING POSSESSION IN THE NAME OF THE UNITED STATES

TOBY welcomed them back with loud barks of joy, which brought Andy and Joe from the hold where they had been putting matters to rights.

“What news?” called out Joe.

“None! Our poor fellows never made this island. I hope they gained the *Meteor*. There were good men in charge of the boats, and it may be they are all right now,” said Harry.

“By the way, Joe!” he added, when the others were out of hearing, “don’t say anything to Mr. Purdy about home, just now at least. After supper we shall have much to talk about and to-morrow you will go ashore with us.”

Joe’s eyes beamed with delight at this for he had been looking at the shore with the ship’s glass and now and then would call Andy’s attention to objects of interest that fell into its range.

When supper was over the party gathered on the after deck and, as had been their custom, discussed the events of the day, or laid plans for the future.

“To-morrow,” said Harry, “we want to explore thoroughly the southern channel through which we were driven by the storm to see whether we can work the *Katharine* out into open water and make a port. Our charts were destroyed by lightning and the instruments were lost in the boats. After this is done we will try to ascertain our position, if possible, or at least as near as we can, and then if time remains, we will name and take formal possession of the island. All of us will be engaged in this work as the ship’s small boat can be used in conjunction with the *Edna*. If we cannot get out we must devise some means of getting word to the nearest port, if it is not too far away, but that will be determined later.”

The whole party retired early for there was much to be done and now that the weather was favorable, it was well to take advantage of it.

The following morning, the small boat with Andy and Harry was taken in tow by the *Edna*, in which were the remainder of the party, and the convoy started for the channel, about one-half mile to the south, leaving Toby alone on the vessel, an arrangement much to his dislike; he barking his disapproval loudly as the boats were leaving. The tide was nearly out when the boats reached their desti-

nation, it being desired to make all soundings at low water. The actual channel itself between the first islet and the main land was only about three hundred yards in length and about two hundred feet wide, but a hidden reef existed on the western side that narrowed it down considerably. This reef was just visible at low tide and then was nearly awash with the sea.

Soundings were made and careful measurements taken from which the whole channel was charted, when it was plainly seen that there was but one way for the vessel to escape. She would have to be towed out by a strong and reliable steam vessel and that of itself must not be a large craft. When this became apparent a dead silence fell over the party which was only broken by the order to go back to the ship.

"It strikes me we might find a passage through some of the other openings," said Mr. Purdy, pointing to the north.

"We will try all of them," said Harry, "but from the observations made a few days ago, when we tried the *Edna*, I am afraid they will not avail us. An ordinary steam tug would be the thing now. Had it not been for the gale driving us just as it did, we could not have gotten farther than the en-

trance before we must have struck. We cannot warp her through, nor yet tow."

When the *Katharine* was reached the boat was left there and Toby taken along with the whole party, who were now in the *Edna*, there being room for all. Apparently the best place for landing was at the mouth of the creek that had been explored when the *Edna* returned from the trip around the island. They coasted along the shore, seeing many interesting trees and plants amid the world of tropical verdure. There were fruits of all kinds, most of which Harry recognized, having seen them at different points throughout the East Indies. After a run of about four miles they rounded into the creek which was quite wide at its mouth with a good depth of water extending inland for some distance. Here, on a gentle grassy slope extending down from the forest line to the pebbly beach, the company landed and secured the yacht. Taking a small American flag in his right hand, Mr. Purdy held it aloft and took possession of the land in the name of the United States of America. Then there was a cheer given and the United States was the owner of an Eastern island, the first in its history.

"We will get an appropriation passed for the 'Committee on Harbors and Channels' to have

that passage widened, after which we shall have the finest harbor in the world," said Mr. Purdy. "Just think of an island like this that may be turned into a paradise, with a natural breakwater guarding it from the ocean. Why! our white squadron could ride in safety here and occupy only a small corner, and as to defense, nature has already fortified it on three sides, and we could hold the fourth against all comers with sufficient artillery."

As it was now noon all the provisions were brought out and a good dinner was served by Andy and Joe who had gotten most of it ready the day before. While this was being prepared, Frank, accompanied by Toby, strolled out into the wood. They heard the report of his fowling piece a few times and shortly afterward he rejoined the party bringing with him two fine pheasants and a brace of partridges. He reported the woods full of birds of all kinds, but not a sign of a beast of any description could be seen.

Leaving Andy to watch at the mouth of the creek, the yacht was then headed up the stream which, for some distance, showed a good depth of water, quite enough to anchor ships of almost any draught. In addition to this, after leaving the mouth a few hundred yards, the banks arose to a height of about

ten or twelve feet, affording a snug berth for several vessels if necessary. Toby barked approvingly as the boat glided along, awaking many shrill screeches and squawks from parrots and other feathered inhabitants of the forest. Some of these birds were resplendent with plumage of many brilliant colors. Now and then a beautiful flamingo would rise from the water and wing its way into the adjoining wood or down the stream.

"That bird!" said Frank, "besides being a beautiful creature in appearance, has more advantages than other birds; it is a good flyer, an excellent swimmer and an equally good runner, and now, while I think of it, we didn't see any over on the west side, for it's quite likely that the oil there is distasteful to them, but I rather think when we once explore the country that slopes away to the northwest we shall meet with animal life that we have as yet not seen. There is quite a large area there."

"A good many square miles, I should say," added Mr. Purdy, "and if we roughly estimate the island fifteen miles long by eight in width there would be about one hundred and twenty square miles, of which we have thus far seen but a small fraction."

By this time the yacht had reached the head of



~ Hudson Island ~

1893 ~

Approx. { Lat $7^{\circ} 15' S$
Long. $92^{\circ} 15' E$.

the navigable waters, where there was still several feet of depth. At this point the water descended a rocky slope from an upper level, making a magnificent picture as it foamed and tossed, now forming small cascades, then swishing around big black boulders to meet and part again in wild riot with other waters that were dashing down into the stream below. The creek at this point was about twenty feet wide and evidently felt the influence of the tides up to the cascade to the extent of a few feet of rise and fall.

“Do you notice there is a different tone to the fall of to-day?” said Harry. “When we were in here before the tone was deeper and now I see it is caused by the difference in the last leap of the water. We were in at low tide that time.”

“Let’s call it the ‘Singing Falls,’” said Joe, who was delighted with the beautiful scene.

“Agreed,” said all in concert, and it was so named.

“Mr. Geographer,” said Harry, addressing Mr. Purdy, “you will please make note of this when your map is made.”

Having secured the boat to the shore the whole party made the ascent to the higher level from whence came the water. They had noticed as they

coasted along the shore that, extending about a half-mile back from the beach, the land made a sudden rise and showed a plateau trending to the north and west as far as their limited vision could discern. It was to this upland that they were now ascending. It was not over one hundred and fifty feet high vertically but on the slope it may have been twice as far. They found the way singularly free from bowlders such as they saw in the bed of the descending stream and in a short time reached the top.

Joe was there first; as he gained the top he shouted in ecstasy to the others to hurry along to see the pretty lake. There was a spontaneous exclamation of surprise as the party caught sight of the beautiful body of water that gave birth to the stream flowing down the slope. It was probably four hundred yards in width and was studded with small green islets, upon which were growing beautiful trees, the foliage of some of them hanging down to the crystal waters beneath. The sun shining through the thousands of leafy openings made a picture that can hardly be described. In the waters were numbers of beautiful fish darting hither and thither, now in the shadow, again flashing like gold in the sunlight, adding still more beauty to the picture. As far back as could be seen

through the trees extended the polished surface of the waters, upon the bosom of which were sporting numerous fowls almost unmindful of the presence of man. For a few minutes not a word was said. It seemed as if they had suddenly stepped into a fairy land where everything seemed to wear nature's brightest garb. The water was so clear that the smallest pebble was visible, though the depth was several feet. Crossing over to the northern side they followed the waters for about a quarter of a mile to the head of the lake where they found it fed by some small streams from the mountain slope.

“I think we shall see four-footed game here if there is any on the island,” said Frank. He had scarcely uttered the words before a beautiful, spotted deer dashed out from a copse just across the lake and made for the forest, then another and still another followed with Toby in full pursuit, their taper hoofs scarcely touching the earth before they seemed to rebound. Frank nervously handled his Winchester but forbore from firing for the reason that they could not care for any large game at that time and besides it would have been refined cruelty to kill an animal simply for the reason that it was game. Frank Miller never did this; although one

of the finest trap shots in the country he never would fire at live pigeons for sport.

"I knew," said he, "that with pure water we should find larger game. The next thing for us to consider is whether there are any of a dangerous character. There may be such as well as these harmless deer."

Harry now proposed that, as it was growing well into the afternoon, they should go back to the yacht and take a look at the different passages through the outer chain of islands as they returned to the ship. The party then retraced their steps along the lake. Mr. Purdy remarked that there was a regularity among the rocks forming the breast of the overflow that he could not account for. They seemed as if they had been carefully placed there. Leaving the plateau they descended the slope and once more were moving down the stream with the ebbing tide, which was already half out. As they approached the mouth of the creek, Joe noticed some large, dark objects lying on a bank of sand and gravel extending out into the stream for several feet.

"What are they?"

"They are oysters!" said Harry, giving the wheel a turn bringing them alongside. Then reversing the screw the boat was brought to a stand-

still for a moment while about one-half dozen were taken into the boat.

"Are they good to eat?" asked Joe.

"Well, no! they are rather coarse and may not be very appetizing, but we will take these along. I want you to examine them when we get them on the vessel."

Joe's eyes glistened at the thought.

"Why not take more?"

"These will do for samples," said Harry. "If you are successful we can run down for more and you see there are lots of them."

By this time the mouth of the creek was reached and Andy was taken aboard once more. Harry had just given the word to start the engine when the sound of some animal was heard inshore rushing along through the undergrowth, apparently after the boat. Frank and Mr. Purdy seized their rifles and made ready for it, but all burst into a laugh when Toby made his appearance and protested loudly against being left behind. Up to this time they had not noticed his absence. He had gone after the deer and of course had been outrun after a long chase. He was taken in and soon curled himself up in a corner pretty well worn out with his unusual exertions. The yacht then headed for the

largest inlet at the northern end of the bay. This was found to be utterly impracticable on account of an elbow in the channel. Then running through it to the outer sea, they took another look along the rocky northern shore. Returning to the inside they examined each opening carefully when the truth finally dawned upon them that there was but one route by which to escape, and they were not able to move the vessel through it with their little crew. At the last islet they picked up all the eggs they needed and then returned to the ship tired out and hungry. After supper all retired early for a good rest from the fatigue of the day.

CHAPTER XIV

BEACONS AND BUOYS

THE following day was the Sabbath and was observed as a day of rest by our voyagers. After the services of the morning, in which they invoked the care of their Heavenly Father in their trouble, the rest of the time was spent in doing such simple duties as were required by the ship's care, while the remainder of the time was spent in quiet. That evening the plans for the coming morrow were discussed, after which they retired for the night. The sun arose out of the eastern ocean the following morning and promised another pleasant day, as had been the case ever since they had been cast upon the island. It was now drawing toward the middle of January, the summer in the southern zones. The weather was delightful, ocean breezes tempering the natural heat of the atmosphere to such an extent that there was but little discomfort experienced from it. Generally at sunrise all were on deck, ready for the duties of the day. Joe was now showing the

effects of the healthy out-door life of the island. The pale schoolboy that embarked on the *Katharine* some months before was now a sun-browned, red-cheeked boy, overflowing with good health and animal spirits. He had learned much of the routine of the ship's work, and was able to take his place in watches for ordinary service, the same as a man. Harry had given him a good insight into nautical calculations, so that, in an emergency, the boy could help himself very creditably. Mr. Purdy had laid out a course of simple electrical studies for him, pending their stay on the island, which would give him a practical knowledge of the science as far as it might be applied to ships or ordinary domestic purposes. These were to begin as soon as the island was thoroughly explored, and beacons erected on the most prominent points on the coast, so that passing vessels would be attracted. Thus the boy's education was to be completed by practical experience in those things that would be most useful in after life.

"Mr. Purdy, please come here!—I would like you to look at these oysters we gathered day before yesterday," said the boy. "Just look at that big fellow with his shell open. Do you know why Harry had us gather them? I don't think they are good to

eat," said he, with a laugh, "even if there is an 'R' in this month."

"No! I am pretty sure he didn't want them for our larder, Joe. In fact they seem to have been forgotten after we threw them into that pail. Just take that fellow out and open it; I have an idea it will surprise you!"

Joe procured a piece of thin iron and pried apart the shells of the mollusk, which were of unusual size.

"Now take your knife and cut it loose from the lower shell," said Harry, who had come to see the operation. Joe did as he was requested.

"There's something hard in it," said he, and then out it rolled.

"A pearl," said he excitedly, "it's as large as a small marble."

And so it was; a beautiful pearl, delicately pink tinted, perfect in shape.

"Well! my boy," said Harry, "if you had this in New York to-day you would get so large a sum of money for it that you would be amazed. In other words there is a fortune lying down there in the creek that will be ample for all of us, but what avails that for us now? We had far better try to get ourselves in communication with the outer world first."

“Amen!” said Mr. Purdy, who had stood smiling at Joe’s eagerness as he opened the remainder of the oysters. “We can begin our signal system to-day, as we decided upon last evening. The pearls may wait awhile.”

Joe found two more fine specimens, which he carefully put away, and then joined the boats that were being put into readiness for the work. First the main channel must be marked by three beacons placed on the islands in such a manner as to attract the attention of passing vessels. These were to consist of stout poles about six inches in diameter and fifteen feet long, sunk into the ground or piled around with rocks so as to be firmly set. On each of these was a cross-arm, pointing along the line of the passage. These arms were painted white, so as to be easily seen from seaward. Then there were four floating buoys constructed from a piece of spar, about five feet long and four inches thick, painted red and white. They were fastened to a chain that was in turn secured to some pieces of pig iron taken from the ship’s ballast, and then anchored along the channel. When completed, these spars stood out of the water a couple of feet, and showed a safe entrance for a smaller vessel than the *Katharine*. This work took more than a day in preparation and

it was only on the third day that the channel was fully marked.

The next beacon was to be raised, if possible, on the summit of the mountain, as they now called it. This involved a few days' work, but our voyagers were anxious to get at it as soon as possible, as the point was no doubt visible for a large radius extending many miles seaward. An expedition to the summit was started out the following morning. Mr. Purdy desired to remain with Andy on the vessel, wishing to complete his map of the island as far as their present data would permit. Shortly after sunrise the *Edna*, with Andy as engineer, was swiftly plowing the still waters of the bay, with Harry, Frank, and Joe as passengers, bound for the shore almost opposite the point at which the *Katharine* was anchored. Leaving the yacht, which Andy took back to the ship, the party proceeded across the grassy lowlands lying between the beach and the base of the elevation, a distance of a few hundred yards, and then entered the forest. Toby, who now regarded himself an indispensable part of the party, was already in advance, beating the bush, much to the terror of numerous pheasants and other game birds, with which the woods abounded. The route selected wound around the mountain and at

its best was somewhat rough. The forest covered the elevation to the summit, where the party arrived in a few hours, without any noteworthy adventure, halting at the edge of a circular plateau of apparently some hundreds of yards in diameter, but overgrown with palms and kindred undergrowth to such an extent that it seemed almost impossible to erect anything that would be visible. Advancing toward the center they suddenly came to a large mound-like elevation, surmounted by not more than a dozen palm trees of small diameter.

"There's just what we want!" said Frank. "Nature couldn't have been more accommodating than that. I am of the opinion that if we cut away all but that one near the center of the group, we shall have a signal post already planted and all we shall have to do is to complete it with our beacon."

"Very good! it couldn't be better for us," said Harry. "Now while you and Joe are taking a rest I will climb the one we have selected and see the lay of the land."

Then taking a stout strap and thong that they had brought with them, he passed it loosely about the trunk of the tree, leaving enough space to get inside; drawing it up to his armpits, he easily

ascended in the manner of the natives he had seen in the East.

“The view from up there is magnificent!” said he, when he had returned to the ground. “Almost every point in the island could be seen if some of these trees were out of the way, but the main object is to have a clear sight for the beacon which will be visible out at sea from the southern and eastern sides.”

Counting, he said there would be about twenty trees to chop down from the slope, and probably more, before it stood clear. They had brought with them two axes, and commenced at once with the lower trees, taking care to throw them outwardly, so as not to interfere with the others. By noon they had cut down six and then the tired workmen stopped for their dinner, which Joe had gotten ready.

When their repast was finished they worked until a considerable opening was made, and then returned to the shore below, without further incident.

Mr. Purdy met them with the *Edna*, assuring them that their work was already apparent from the ship.

“To-morrow,” said Harry, “we will have the whole party at work and will finish the job in a couple of days, and when that is done we will cross

the interior to the north and west sides and erect similar signals, for it will be necessary to do this if we expect to have mariners call here."

That evening Mr. Purdy had ready for the tired workers a tempting supper of turtle soup, one having been captured by Andy during the day, fresh eggs, and tea, together with some choice canned meats, and they all enjoyed it so much that a vote of thanks was tendered him and Andy for their successful culinary feat.

The following day, leaving Joe and Toby in charge of the ship, the party made an early start and by afternoon Joe could see the signal standing out boldly, ready to give notice to any passing mariners that the island was inhabited and assistance was wanted. Sunday being near at hand the expeditions to the western and northern sides of the island were deferred and preparations were made to move the *Katharine* further up the bay to the mouth of the creek, as it was a more desirable anchorage, and would keep the ship most of the time in fresh water, which would be better for her. Steam was gotten up in the boiler and the anchor hoisted. Placing Andy at the wheel, the others made enough sail to carry the vessel up the bay. Like a living thing the *Katharine* took the light breeze and grace-

fully swung around to the north and then moved away from her old anchorage, headed for the creek that fell into the bay about four miles further up the coast. In about half an hour the ship arrived off the mouth of the stream and was anchored within one hundred yards of shore. The position here was more desirable in many ways. They had plenty of good fresh water from the creek and in case of storm the vessel could be worked into the mouth itself, lying snugly between its elevated banks. The rainy season, with its storms would be along in a few months, so it was well to be prepared.

Mr. Purdy reported that the *Edna* had now used one barrel of naphtha, and that it would be wise to see about getting a new supply soon. He promised to make an oil still which could be taken around to the oil creek and placed in operation, giving them both naphtha and coal oil, which they could readily distill from the crude petroleum obtained from the great spring on the south side. Joe swung his hat and went through the pantomime of cheering when he heard this. He had been looking with anxious eyes at the fast-disappearing supply in the barrels, for when that was used the *Edna* would have to go out of commission for want of fuel, and now, here was an inexhaustible supply right at hand.

CHAPTER XV

FURTHER EXPLORATIONS

WHILE the rest were engaged in getting materials for the oil still, Harry sent Joe and Andy up the creek with the small boat, where they secured a large lot of pearl oysters. These they loaded into the dingy and then brought down to the mouth of the stream, where they took them out on land, leaving them there to be opened at some future time, it being much less trouble, although more disagreeable to the sense of smell to do this after they commenced to decay.

It was well for the castaways that the ship required but little care beyond keeping the hull and rigging in good condition. Thus far the weather had been perfect, but all knew that the rainy season would be coming on and still there was plenty to do before it opened. Now that the *Edna* would need fuel sooner or later, the fact was brought home to them that just as soon as the northern and western beacons were placed in position, the fuel must

be manufactured, as the handy little craft had rendered itself almost indispensable. There were about seventy-five gallons left from the three barrels, which would be enough for a few weeks' use, but it was desired to have enough for the entire rainy season stowed away on shore, safe from danger, so that the oil refinery must commence operations soon. Promptly at sunrise the following day, the party were ready to set out, leaving Mr. Purdy in charge of the ship at his own request, as he wished to examine the waterfall at the head of the creek, with a view of procuring power from it for different uses on board of the vessel. In addition to this, he wanted to devise some methods of sending word to the outside world if it were possible. The party started, after having an early breakfast, Mr. Purdy taking them to the falls with the *Edna*. Each one was well armed for the trip. They carried with them also tools and nails with which to make their signals.

Bidding Mr. Purdy good-by, the party ascended to the higher ground and skirted along the lake, proceeding in a northwesterly direction toward the coast. In a direct line this should be reached in about four miles after leaving the lake, the route lying through a forest abounding with tropical

trees of all kinds, among which they found the date palm, the bread fruit and cocoanut in abundance. Frank also pointed out the sago palm as they went slowly along. Andy found the mangosteen fruit and brought it in for the party in abundance. In this way the travelers moved leisurely, seeing new wonders at almost every step. The brilliant plumage of many varieties of birds seemed, at times, to flash like colored flames, as they flew from tree to tree. Harry warned Joe not to eat anything, however tempting and innocent it might look, without first calling his attention to it, for in this Eden there were some fruits that were poisonous in their effects. Suddenly Toby dashed forward with a loud barking; in an instant the trees in front of them became the refuge of a lot of monkeys, squealing and chattering as they looked down from the branches in such a comical way that the whole party laughed heartily at the sight.

"Now, then!" said Joe, "at last we have discovered the inhabitants of the island, but they seem an inhospitable crowd. Look at them glaring at Toby," who was standing up on his hind legs at one of the trees, barking loudly at the strange creatures, seemingly delighted at the terror he created among them, but he suddenly changed his belligerent at-

titude and beat a hasty retreat as a solemn looking old monkey threw a piece of dead wood at him, which action was imitated by the others to such an extent that the explorers were glad to get away without being hit.

"I want to capture one some time," said Joe, "and train him; he will be company for us when the rainy season comes on."

By this time they had gotten almost two miles into the forest, their progress being necessarily slow, on account of the undergrowth and fallen trees. They carefully "blazed" their way as they went along, so as to be able to retrace their steps without a compass. Deer were often seen as they bounded into the forest from large openings upon which they had been feeding, but they were not disturbed. Joe's attention was drawn to some beautiful butterflies, whose wings were powdered with grains of golden green and dotted with crescent-like spots of gorgeous color that caught the sun's rays like colored spangles. These handsome insects abounded in the forest in such variety that he was tempted to commence making a collection of specimens by trying to capture a fine large one that fluttered away from him and settled on an adjoining bush, and instantly disappeared from right be-

fore his eyes, although he was positive he saw the exact place it settled. It was not long before he saw another and carefully following it he saw it alight as before, and melt away from sight in an instant.

“Well, that beats me!” said Frank, who had seen them vanish in both instances. “It’s more like magic than nature. Let’s try it again.”

They did not need to wait long before another was winging its way ahead of them, pressed by Joe, who was preparing to capture it. Down it settled on a twig and almost as quickly passed from sight, but this time, Frank, never taking his eyes from the point where it alighted, placed his hand on the twig and examined it. There were a few dead leaves upon it, but a close examination showed them that one of them was the mysterious insect, which nature had endowed with the faculty of simulating a dead leaf so that it deceived its enemies, and thus protected itself. Harry, who had seen this same species in Java, and knew their habits, laughed heartily at the puzzled pair, well knowing what the result would be. Beyond seeing the deer, the travelers saw no animals worthy of remark, although Harry cautioned the party against straying away for fear there might be some dangerous beasts lurking in

the forest; nor up to this time had they seen a sign of any reptile, which might readily infest a country such as this was. Not much time was taken for observation on this trip, so that by noon on that day they suddenly came out on the cliffs that formed the rocky coast on the northern and western sides of the island.

They had arrived at the highest point; Frank readily recognized some places along the coast which they had passed on their trip around the island with the *Edna*. Before leaving the lake they had taken the precaution to fill improvised canteens with its pure water, for they did not know the country beyond. It was well they did so, for there was none found in the last mile they traveled, and it was not likely there was any in the immediate neighborhood of the cliff. Dinner being over, a suitable spot for the beacon was selected, it being fortunately found on the extreme northwestern corner of the island, and when in place would be visible from the west and north.

“If we put up a suitable one here,” said Harry, “it will be visible for very many miles out at sea, and if I am not mistaken in the size of the island, a ship coming from the west or south can see this signal and that on the mountain at the same time.”

Then climbing a tree on the edge of the forest that extended near to the cliffs, he called out that there was an uninterrupted view from there to the mountain, upon the summit of which was the other beacon in plain sight, about eight miles away. It would have taken a vast amount of labor to clear away trees enough to make an open space, so he proposed that a suitable tree should be selected for a lower part. This was readily found and trimmed clear of its branches on one side, leaving a stout one for a rest. Then a straight young tree was chopped down and trimmed into a strong pole about twenty feet in length. At the upper end of this were placed the cross-arms while it was still lying on the ground. This pole, when ready for hoisting, weighed about two hundred pounds. With the aid of a strong little rope they had brought with them, it was finally brought to a perpendicular position against the tree and temporarily secured to it, while the rope was passed over an upper limb and down to the foot of the pole. It took the united strength of the party to hoist it, but slowly it ascended, being secured as it arose, until finally it rested on the branch left standing for it, and then, when firmly lashed to the main trunk, it had a mast-like appearance, firm and effective. When it was at last

completed, the signal overtopped the highest trees some twelve or more feet, standing out in bold relief from the forest. It was almost too late to return to the ship that day, so arrangements were made to camp for the night. Harry having divided the party into watches of two hours for each; it was passed quietly and peacefully by the tired workers.

CHAPTER XVI

MR. PURDY DISTILLS NAPHTHA

THE beacons were now all placed, if we except one more that might yet be placed near the mouth of the oil creek, at which place they would now be engaged for several days. After a good breakfast of ripe fruit, which had been carried with them, canned meat and eggs, the latter having been found in plenty on the ledges of the cliffs and cooked in salt water that Andy procured, the party made preparations for their departure. Nor was Toby forgotten; Frank shot a few birds for him, which he greedily devoured.

They now retraced the path of the previous day, well satisfied with their work, arriving at the Singing Falls by noon. Frank signaled Mr. Purdy by discharging his gun, but at the same time bringing down enough pheasants to last them for a few meals. While the *Edna* was coming, the whole party took a bath in the limpid waters of the lake, refreshing themselves wonderfully after their toilsome

journey. The yacht arrived at the foot of the cascade in a short time. Mr. Purdy welcomed them back to the ship where he had much to tell them. After dinner he produced his map and asked for names of the different points. The island itself was named after the noble river from whence the *Katharine* started, Hudson Island; Eastern Bay being the name given to the waters in which they now were. Western Bay were the waters to the west of Providence Point, into which Oil Creek emptied. Then there was Fairy Lake, Singing Falls, the Northern Forest, and Mount Hope. Thus far they had explored and so named them.

At the time of the storm, Harry, Frank and Mr. Purdy each had the correct chronometer time on their watches, these latter having been wound very carefully ever since, and now upon comparison they were still practically the same. So it was agreed that this would be taken as standard inasmuch as their ship's chronometer was rendered useless by lightning. From these an approximate longitude was obtained. Then from dead reckoning and other observations the latitude was fixed as nearly as possible, the two being as follows: Latitude, 7 deg. 15 min. south; longitude, 92 deg. 15 min. east. But even this left them rather in the dark, as their charts

were so charred by the flash that they could not place their position with a certainty. This, however, would be something to work upon should a messenger sent forth ever reach the proper hands.

The oil still was manufactured from four light iron cylinders found in the cargo, which were closed up and towed behind the *Edna*, in which also was a lot of half-inch gas pipe. Thus loaded, the boat started for Western Bay, where it arrived in safety, then proceeding up the creek, the cargo was discharged and the remainder was sent for, with all other appurtenances.

"How will you separate the naphtha from the crude oil?" asked Joe of Mr. Purdy.

"Well!" said he, "first we will fill these cylinders with a quantity of crude oil, then close them with the screw caps Frank has made and connect the line of gas pipe which we will run through the creek under the water for some distance and fasten it to the receiving cylinder we left there. Then with a fire under the boilers, the crude stuff will be converted into vapor, which will pass into the pipe, and being condensed by the temperature of the water on the outside, it will again take a liquid form, which we must collect when it assumes the right gravity, which we must measure with a hydrometer

I have made from a vial and graduated in the naphtha we now have.”

The four boilers were now placed in position and not being much larger than ordinary kitchen range boilers, were easily placed on a stone foundation plastered with clay. Under these were placed iron pans to contain the fire, it having been decided to use wood at first, as there was plenty at hand. The cylinders were filled for the trial and everything being in readiness and rendered safe as possible, the match was applied. It was plenty far enough from the spring for safety and was far enough removed from the small creek to avoid all risk. The only question now was whether there was enough elevation to the boilers.

After a while the cylinder retorts showed signs of boiling and in a few moments a light liquid, not much more than vapor, made its appearance at the receiver. Then followed the flow of another still heavier, both of which were run out of the waste cock. Shortly the flow became heavier and the hydrometer, which was simply a long vial weighted with shot to keep it floating upright, was placed in it and sunk to the mark placed by Mr. Purdy.

“Here it is,” he said, “but we can’t expect much

as it will not run long before heavier oil will come over."

About forty gallons passed through when it was stopped. A test showed it to be all right. The refuse was then drawn out of the cylinders by a pipe Frank had connected and led into the water and the cylinders again filled as soon as all vestige of fire was extinguished.

"Can't that portion be used, too?" asked Joe.

"Yes, indeed," said Mr. Purdy, "that is really the most valuable portion, as the lubricating oils are the last in the retorts. They are worth ten times as much as naphtha, but we don't need any now, and there is still another product which was at one time thrown away with the residue; that is, a black coke which, ground up, makes the best electric light carbons, such as are used in arc lamps. At first, crude petroleum was distilled only for oil for illuminating and an enormous quantity was thrown away before its value was known. Even the chewing gum, that is so extensively used, is a product of petroleum in the shape of paraffin wax, and this in turn is used extensively again in candy making, matches and other purposes. It's doubtful whether we yet know all the uses this wonderful 'rock oil' can be put to."

A second lot was distilled and in all about two barrels of naphtha secured. These were placed in the ship's small boat and towed back to the anchorage, where they were placed ashore for the present. They now had enough for several hundred miles of travel.

CHAPTER XVII

THE SIGNAL BALLOONS

THE days and weeks came and went, with their various duties, until over two months had elapsed since the *Katharine*, threatened by fire and storm, was driven into Eastern Bay, at Hudson Island. During that time our voyagers had kept themselves engaged in making every provision for the future. Beacons had been set, portions of the island explored and fuel oil discovered and turned to practical use, and all preparations made for the storms of the rainy season, which they knew to be coming, but for which they could only wait. The ship was anchored off the mouth of the creek, with a cable extending inside and secured there, so that at the approach of a hurricane, with the aid of the steam winch, the vessel could be drawn into the cover for safety, and in like manner drawn out again by an anchor astern. The provisions were carefully noted with the result that, with those in cargo and the products of the island, which in themselves were

sufficient, they had enough for all time. Not once in all this time had a sign of a sail been seen, making evident the truth that Hudson Island was not in the track of vessels going to and from the East Indies. That it was not of sudden volcanic formation was seen from its forests and water-worn rocks, and especially the latter, which, on the western side, showed that they were of a granite formation.

The castaways realized that in all probability the ship was given up for lost by the sorrowing ones at home, and if it so happened that the crew or a portion of it were saved from the hurricane, they would, as soon as the opportunity occurred, send to New York the terrible report of the destruction of the ship.

Their health was excellent. The pure air of the island, coupled with a healthful diet and constant occupation, gave them vigorous bodies and fitted them for any emergency that might arise. In order that a good lookout might be kept, one person was usually left aboard ship when expeditions were made. There was one factor in their island life, however, that they could not afford to overlook; this was the danger from piracy. As yet they had not seen any indications of it, but it was well known that it still existed in these waters, there be-

ing many pirates that were not yet driven from the seas. It was thought wise to be ready for anything of the kind; to this end a stock of repeating rifles with ammunition, was taken from the cargo and always kept in readiness, so that a tolerably fair resistance to a much larger party could be made if necessary. The pearl oyster beds had been gone over, with the result that a fortune could be realized from what they had gathered, but it was almost with indifference that they were regarded now.

Often in the still evenings, as they gathered on the after deck, they sat and planned and devised methods for their deliverance, all of which could be tried as soon as they could bring them into practical use. Bottles, with an account of their situation securely sealed therein, were frequently taken out to sea and committed to its care. Some of these came back; one even drifted into Eastern Bay again, as if unwilling to leave the ship. Then it was that Joe's ingenious mind suggested balloons, which idea Mr. Purdy at once grasped and put into practical form, so that the party was again busy on deck the following bright morning, sewing up an oiled silk material which had been cut into shape after some trials by Harry, and then stitched with Andy's clever needle into miniature balloons, of about four feet

diameter. The whole lot were then inflated with a plumber's air pump to stretch them, and then treated to a covering of rubber dissolved in naphtha, and practically made gas-tight. There were four made, all being ready for inflation in a few days. Hydrogen gas was made from iron in very small chippings and filings placed in a solution of sulphuric acid and water in proportions of one of the former to four of the latter, it being generated in an air-tight cask with a discharge pipe leading to the balloon.

By this process the hydrogen was released from the water and, being over fourteen times lighter than air, it soon found its way to the balloon, which it speedily inflated, giving it a pull of a few pounds, which was amply sufficient for the purpose designed. The name of the ship was painted on it in large white letters, so that it might be read with a good glass from quite a distance, in case it passed within range of some inhabited point. This was based upon the hope that even if it did not make a landing, it might attract some shipmaster's attention, if it came near enough, and, seeing the name "*Katharine*," he would report it to the proper authorities, who would trace it back to the ship that was supposed to be irrevocably lost. The gas ap-

paratus was charged and inflation was commenced. It did not take long; so it was decided to send one away at once; reserving the others for intervals of time that seemed best. To the little traveler was attached a tin can with a full account of their situation, with instructions to forward to Captain Henderson at New York, at once, or to the Hong Kong office of the Red Cross Line, or to the nearest consul of any nation whatever. Waiting for a western wind, this was set free and soon was lost to sight. Would it be seen or found? They could only hope.

A few days after this Mr. Purdy proposed a trip through the forest to the west where there was still a large area of country to be explored. Andy was detailed to remain on shipboard as he wanted to do some painting that was required. The party did not take the yacht, but started at once from the shore, proceeding directly to the west, all well armed and provided for a three days' trip, and in high spirits at the prospect before them. Leaving Fairy Lake, where they took in a stock of water, they proceeded in a southwesterly direction that would have eventually brought them out about the head of Oil Creek which lay several miles away, taking its

rise at the westerly base of Mount Hope. This was moving in a new direction and for the first time our explorers saw this section of the island.

“Look at this singular vine,” cried Joe, pointing to a long slender creeper that ran along the ground and over stunted trees, while hanging here and there upon it were beautiful green pitcher-like growths filled with clear water.

“The pitcher plant,” exclaimed Harry, eagerly examining it. “Here is a plentiful supply of the purest water,” said he, as he poured from one of the beautiful green purple mottled pitchers about a quart of clear, sparkling fluid. These natural water-carriers abounded on all sides at this point. They drank of the water and found it excellent. Frank, ever thoughtful, even held one for Toby to drink from, and the dog lapped it with eagerness, for the day was warm and he kept himself busily engaged as they progressed through the forest. They saw numerous troops of monkeys and often paused to watch their wonderful antics on the trees. Toby especially seemed to arouse their ire as he loudly barked at them. They would grow bolder at times, hanging by their long tails just above him, making the most ridiculous grimaces.

"I wonder whether there are any orang-outangs here," said Frank. "This would be the country in which they would be likely to be found."

"There might be some," said Mr. Purdy, "though I think we should have seen them ere this. These creatures, though very strong and dangerous, when cornered, are comparatively harmless in the freedom of the forest. It would seem almost like killing a human being to shoot one, as do some naturalists. For my part, I'll not feel badly if we don't see them, for there is certainly animal life enough on the island that we have seen thus far to make it a wonderful place."

"What puzzles me," said Frank, "is, how did these animals get here? There is no land within fifty or it may be hundreds of miles, from which they could migrate. The birds, of course, could fly, but there are varieties here that I am certain cannot or do not fly long distances. It sometimes seems to me that either this island was once a part of a mainland and separated by some mighty cataclysm, leaving such animal life as we encounter upon the separated part, or else it was once inhabited by a race that has since passed out of existence who stocked it as they would a park."

"I think there is more evidence of this latter than

of the first theory, of a great separation," said Mr. Purdy.

"Why do you think so?" asked Harry.

"Well! while you were putting up the beacon in the northwest, I remained on shipboard to work out the map and to look up some matters in regard to methods of communication with the outer world. I wanted to know something more about the size of Fairy Lake, so I took the yacht and steamed up there. You remember we had already noticed the regularity of the rocky wall over which descended the waters making the Singing Falls. I again examined it closely and am now satisfied that the rocky breast holding back that water above was constructed by hands of a people long since passed away, and that Fairy Lake is simply produced by a large dam that has become overgrown and rough-looking, built by people who wanted it to look like a natural cascade."

"Why would they do this?" said Frank. "If it was intended for a reservoir it could not supply anything above it, and we should hardly expect to find a people settling on the lower ground between the plateau and the shore."

"I think," said Mr. Purdy, "that it was used both for drinking water and may be for power."

The people who dammed that stream were a different race from those now inhabiting the East Indies, and I shall not be surprised if we find plenty more evidence of such work."

"And do you think that our beautiful island was once the dwelling place of people who were possessed of intelligence and perhaps lived as we do?" queried Joe.

"Yes! perhaps," said Mr. Purdy. "I am not sure of it at all, but when I further examined the Lake, I walked out along the west side from the overflow to the commencement where the stream comes in from the base of Mount Hope——"

"What did you find there?" interrupted Frank.

"I found that there was once a broad stone avenue of what appeared to be large squared stone running all around the lake. The growth of years has so covered it, and roots have so moved the stone around that I could not be certain of it, but my belief is very strong that there once lived here a people who possessed some knowledge of engineering."

"Where could they have gone to?" asked Joe. "One would think they would have left some other evidence behind them."

"Which we may yet find," said Mr. Purdy, "al-

though my theory may not be well founded. So much has been done, and is constantly claiming our attention that I forgot to mention it."

"There is still a large unexplored country between us and our first line of march when the northwest beacon was erected, we may find something in there that may throw some light on it," said Harry. "I think when we reach the summit of the ridge that seems to run from Mount Hope to the northwest, we might follow it until we see how our beacon is getting along and then return in a circuitous route through the forest more to the north of the island. Then the next day's journey might be more to the south."

To this they all agreed and the party headed to the northwest soon after. As it was now almost noon and the sun was growing more oppressive, the party halted for their dinner and a few hours' rest. A copious supply of pure water was secured from the ever present pitcher plant, which appeared to abound on this part of the island. Then there was bread of Frank's baking, which all praised, some cold venison from a deer shot a few days previous, cold boiled eggs, with a dessert of mangosteens. After dinner the party gathered a supply of large pieces of dry bark, and having spread them in the

shade of some large trees, they lay down for a noonday nap, lulled to sleep by the singing of birds and the leaf music of the trees as they quivered in the pleasant breeze. Toby alone remained awake and lay at Joe's feet; nothing escaping his vigilant eye; nor was there an unusual sound coming from the depths of that tropical forest that was not noted by him, but the party slumbered on in safety; Mr. Purdy being the first to wake up. It was almost two o'clock in the afternoon when the party again started on their journey with the intention of reaching the open strip on the west coast in time for any observations they might want to make by daylight. They would have about four hours to do this, having still several miles to travel, but it could be done leisurely.

When they had been on their route about a half-hour, Harry, who was in advance, turned and signaled to the others to advance cautiously; then pointing to the middle branches of a fig tree ahead of them, they saw a most beautiful large bird.

"The Great Bird of Paradise," he whispered.

The bird was somewhat larger than a good-sized pheasant, and sat looking away from the party unconscious of their presence. Its neck and throat covered with scale-like feathers of brilliant emerald

green with deep orange plumes on either side almost covering its pink legs. From the tail there extended downward two slender wire like feathers over two feet in length, gradually curving throughout their length in the shape of an inverted lyre. After a few moments, the magnificent creature suddenly became aware of the presence of man and quickly flew away from the admiring observers; much to their regret; but Harry, knowing their habits, said it was quite probable that they would see more of them as it was likely there were plenty on the island where they were in safety from destructive savages who hunted them for their plumage to be sold to traders.

“What do they want with them?” asked Joe.

“My boy!” said Mr. Purdy, “the traffic in birds is regulated by fashion. Woman, who is often foremost in all good and philanthropic movements, is responsible for the awful destruction of these beautiful creatures by demanding them for ornaments for hats. If governments do not step in and prevent the wholesale slaughter, it will simply be a matter of time when many of the beautiful birds are completely exterminated, as was the great auk of the northern latitudes. In just such a criminal manner the American bison that once roamed the

plains in millions, were almost annihilated. The United States government is now protecting a small herd in the Yellowstone Park, while a few are kept elsewhere. They were sometimes shot simply for 'sport' by people who wanted it said 'they shot a buffalo.' This spirit of destruction and wicked waste of life and material has characterized the nineteenth century, but I am glad to say that now steps are being taken to remedy the evil, which not only threatened the destruction of the dwellers of the forest, but the forests themselves!"

It was late in the afternoon when the party arrived at the west coast which they examined closely but saw nothing unusual along its rocky sides. Far to the north they could see their beacon outlined against the sky, while to the east, Mount Hope towered grandly, showing the beacon boldly rising from its extreme summit. As night would soon be upon them, Harry and Frank gathered dry grasses and palm branches with which they made up beds, while Mr. Purdy, assisted by Joe, prepared supper for the party. Again, as was their invariable custom, they divided into watches of two hours each, commencing with Joe who stood from nine until eleven, when he awoke Frank who, in turn, had the watch from eleven to one. The night was

beautiful. The past full moon rose late in the evening and was now casting its rays along the western slopes of Mount Hope and then sending them far out to the deserted sea where they seemed lost in the blue haze.

As Frank looked at the glorious Southern Cross in that hour of stillness, now dimmed by the lunar light, he again felt the influence of the hour when in the midst of the broad Atlantic, he at last recognized the love of a Heavenly Father. How the events of the past five months crowded through his mind! The meeting with the disabled *America* and her passengers; the pleasant days that followed in Cape Town; the parting and then that farewell signal that Mr. Purdy so humorously said would apply to others than Joe. It was true he had met them then for the first time. Their stay at the Cape had been brief, but the recollection of that short period and the joyous anticipation of meeting again, together with many other pleasant memories of the delightful week, came crowding upon him, and now how changed! He imagined that they saw now only a fierce burning hulk in the midst of a hurricane with no eye to pity, no hand to save! Lost! Lost! Like a disembodied spirit that could only yearn for the loved one that it sees in life, they could

only stand in utter helplessness and wait for deliverance. But when and how would it come, if it came at all? The thought almost maddened him. Why could not Mr. Purdy, whose master mind seemed to find a method for surmounting all difficulties; devise some means for flashing a message homeward?

They could not stay here always. The yacht was too frail for an ocean voyage or they could take it and steer east until some land was reached. Then he thought of Harry, faithful, cheerful, full of hope for their rescue or escape. How well he knew that the last signal sent from the departing tender at Cape Town could be read between the lines, and how Harry blushed when Mr. Purdy made that droll remark. Would their floating messengers be picked up? Or would their balloons be seen in that mighty area of water and sky? And so he stood and pondered until he could contain himself no longer. He started quietly toward the cliff to try to change the current of his thoughts with walking. As he passed the light baggage they had brought with them, he observed a small Bible lying on top, placed there by Harry, who always read a few verses before the evening prayers. He picked it up and opened it. In the

clear tropical moonlight, he read a verse marked by a turned down leaf. It was the first Bible he had looked into for years. It spoke the words of cheer from Joshua i. 5: "I will not fail thee nor forsake thee. Be strong and of a good courage."

CHAPTER XVIII

A PERILOUS EXCURSION

FRANK did not wake up the next sentinel but remained on that silent watch until the first appearance of dawn and then lay down for an hour while the others were getting breakfast ready. The line of march was then taken up for the day, it being the intention to proceed leisurely to the southeast in the direction of the oil spring to see after the still, and then to cross over the high land on the northern slope of Mt. Hope and proceed to the vessel. The party were on the march about nine in the morning, Toby as usual scouring the forest in all directions continually doing advance duty. They had not gone far into the wood before Harry pointed out to them the sugar palm, which seemed to grow in abundance on this side of the island.

“Can we get sugar from that tree?” asked Joe.

“Yes, and wine too!” replied Harry. “We will come here some day and make sugar for ourselves,

as the stock on board the vessel is running low. It will not take much work to extract it, but look at those trees," said Harry, pointing to another clump of palms just beyond them, "there are trees that will interest us probably more than these sugar palms."

"It seems to me," said Joe, "that we mostly meet with palms, yet they have such a great variety of fruits."

"True! nature has given to the palm trees a variety of uses that is marvelous," said Harry, "but this tree," pointing to one in the clump rather thicker than the cocoanut palm, but not so tall, "has no visible fruit, yet, unless I am much mistaken, it will provide food for one man in plenty and last him for a whole year."

"And good wholesome food, too," said Mr. Purdy, who recognized it as the sago palm.

"How is it prepared?" asked Frank. "I am inclined to try this wonderful product."

"In order to gather and prepare this," said Harry, "it will be necessary to cut down the tree and that one just getting ready to flower is one we will cut down unless we find them on the east side, which I think is quite probable. Just take notice of that spike of flowers on top of that tree to the

left; that is its last effort. It will die now, having lived anywhere from ten to fifteen years. The leaves, as you see, have a strong rib in the center, and this rib, which is quite thick, is used often in place of the bamboo for building and in some respects is superior to it. To-morrow, if we can get the time, we will make sago bread and cakes that will be as nice as our own home bread that we have been making, and have the advantage of being able to be kept for years, if necessary. That tree, while a blessing in one sense of the word, is also a drawback to the country where it grows plentifully."

"Why so?" asked Joe.

"Because a man needs but one or two trees for a whole year's food. Two men will cut down and prepare a tree in five days; then with the baking, which will take five days more, they will have enough food to last them six months, although it will keep and can be baked as wanted afterwards, and it is this that tends to make the natives lazy."

"What a paradise this would be for the American tramp," said Frank. "Think of it! Only ten days' work for a year's board!"

"My experience with tramps in the matter of work," said Mr. Purdy, "convinces me that ten minutes' work would be too much for them. These

Knights of Hard Rest would smile at your proposition and give the island a wide berth."

The party had by this time reached the more open country to the south and in due time arrived at the oil spring, which was still bubbling up in the center as it may have done from time immemorial. Mr. Purdy made some measurements, proving that the basin was a perfect circle and then with a stout bamboo improvised into a sort of pick, he began clearing away some of the dirt at the edge; this he did until he exposed a stone about three inches below the surface and in a few moments more called out to the others, who had scattered round.

"Eureka! This proves it!"

"Proves what?"

"Why look here! this spring is walled in; look at this masonry." And sure enough, by clearing away some more of the accumulation, it was seen that the spring was neatly walled with cemented blocks.

"Now," said he, "this convinces me that our Fairy Lake is artificial and to my mind was used as a reservoir by some former inhabitants of the island. I am sure now that we shall find more evidences of their work in the upper forest, to which I propose we go as soon as we get through with more press-

ing work, that is, if the rainy season, which is about due, doesn't prevent us!"

To this all agreed, for the subject was now growing more interesting as the evidences of a former race came into view. They did not stop to explore any further but took a direct line for Eastern Bay, arriving there during the afternoon, tired and hungry. In another hour all were again on board where Andy had made great progress with his paint brush. The following day, painting was finished, sails were prepared for the rainy season, and then steam was raised for the winch which drew the *Katharine* into the mouth of the creek, where all was made snug for stormy weather. The next day sago palms were found near Fairy Lake, and one was cut down. Immediately the trunk was cleared so that a broad strip could be cut out of the upper side as it lay on the ground. When the cut was made, the pithy matter composing the inside was exposed to view. This was taken out with chisels and placed in receptacles brought for the purpose, there was then left only the outer skin of the tree. After the pith was all extracted, it was taken to the creek where a sieve was filled with it and water poured thereon, and the mass was kneaded until nothing but the fibrous refuse was left. The water

being carefully gathered and run through a trough made from the bark which had a depression in the center in which settled all the solid sediment, which was the portion wanted. This was then formed into cylinders, or rather into bucket shapes and then covered with sago leaves; the operation being repeated until all was used in the same manner. After this the raw material was taken down to the vessel and put away for next day's work, as the sky gave warning that the wet season was now at hand. The yacht was safely covered over with its stout canvas cover and moored out of harm's way, being attached to a stout line extending from the ship to a tree on shore, so as to avoid any rough usage against the ship's sides. When the party assembled for supper rain was descending in torrents and as it can only in the tropics. The wind rose and lashed the ocean into a fury along the outer shore of the islands, while inside it was comparatively quiet, although the swell was rather heavy. The ship was disturbed but little. The heavy squalls did not have more effect than to swell the water under her at times. In the cabin, which was still lighted, there was plenty of cheer and comfort. Mr. Purdy was playing on the mandolin, accompanied by Frank on the guitar while the rest were delighted lis-

teners. Then Andy was asked to sing one of his funny Dutch songs, the instruments carrying the tune, which he did, singing:

“ Ach was ben ich ein lustiga Buh,
Ach was hop ich so shecklicha shoo,” etc.

each successive line adding a new adjective until the last lines were a torrent of Dutch words held to one note like a chant.

Andy was always applauded for the prodigiously tongue-twisting song, but he made no effort of it. Toby was now called to the front and made to perform many amusing tricks by Joe, and so the first evening passed. A Committee on Programme was appointed for the purpose of getting up entertainments, to be given during the rainy season. Then other evenings were to be devoted to work and study for the various members of the party.

The following morning, the sea was in a furious state. It was really the first time they had seen it so, for it had gone down considerably during the first night when they were driven into the bay. The surf roared and thundered on the rocky front as if it would engulf it. In the forests, the wind was swaying trees, often overthrowing them in its wild fury. With the ship's glass they could see that the

beacon on Mount Hope was all right, as well as one of those on the channel; the others, either being rendered indistinct by the scud from the sea, or were blown down in spite of the stout anchorage given them, but this was not serious as no vessel would attempt a landing at an unknown island in a storm like this. There were plenty of provisions on the ship now, together with fruits of various kinds gathered during the last week. The sago was tried in the cook's galley. Frank had made an oven from some fine clay under Harry's directions. This was simply a clay box about ten inches square with three partitions running through it from side to side, forming four divisions, fashioned after the ovens of the islanders in the Celebes. The raw sago now being dry was powdered and sifted, the spaces were filled and the whole baked for a short time when the cakes were taken out and tried and pronounced excellent. They also made some with the addition of sugar and cocoanut, which they voted quite a delicacy, but as their stock of sugar was running short, these latter were made only on special occasions.

Now, while they were confined to the ship for the greater part of each day, their stock of pearls was overhauled and examined and other oysters

were taken out and laid on shore to be opened; in time. Joe, who had performed most of the work, surprised all by producing nearly a hundred specimens, most of which were large, but there were about twenty-five of extraordinary size and beauty. Mr. Purdy thought these latter alone were worth many thousands of dollars, while the whole lot was worth a fortune. It was agreed that they should be common property with all additions found thereafter and that Joe should be the keeper of these treasures. There was no doubt a large number that could yet be found when the weather would permit, as the mollusks were always growing.

As it was likely there would be more or less severe lightning accompanying the storms, it was thought best to protect the vessel from any further damage by placing conductors on the main and mizzen masts. A reel of copper wire was taken from the hold and enough taken from it to reach from the "sky scrapers" on each mast to the water; when this was in position it was simply fastened by large staples and formed a perfect protection as they afterward found. This work was done during lulls in the storm, which was now daily breaking over them. The waters in the bay were but little troubled when compared to the outside ocean which was

sending its huge green rollers into the small islands where they were caught and rent into clouds of spray as they dashed against the rocky shore, but while the bay was safe enough for the ship, it was not thought always expedient to use the *Edna* for excursions to the islands, when in quest of eggs and turtles which abounded there. For this purpose the small boat was rigged with a cat sail and used as the occasion demanded. Generally the trip was made by Andy and Harry but on one occasion, after they had been confined to the ship about ten days, Joe asked permission to accompany Andy. The inside looked safe as it usually did, and with no signs of the blow resuming for some time, Harry gave his consent. The boat went its way without any difficulty and reached the islet, where a supply of eggs was gathered and then set out upon its return. Harry and Frank were standing at the wheel of the *Katharine* watching them as they had already headed for the ship and were well under way when Frank called attention to a heavy, black cloud arising in the northeast, that was apparently a resumption of the storm. It was evident it would be upon them before the boat would be more than halfway across the bay. With Andy at the helm Harry did not fear for the safety of the little craft,

but Joe was sailing it, Andy being engaged forward in putting something to rights, they could not see what. Suddenly the squall struck the boat with its sail set and before the sheet could be eased off, the pressure of the wind bore it down to the water, capsizing the boat.

Calling to Frank to haul in the line that held the yacht, Harry, with sheath knife in hand, was on her deck in a few seconds and ripped away the canvas covering at the rear while Frank unloosed it from the front. In another moment, the *Edna* was headed for the wreck at top speed. By this time the cover had been removed and hastily hauled in so as the present as little surface as possible to the gale that was howling in from the northeast, catching the yacht on the quarter. The little craft rode in the rising waters without difficulty and was within a few hundred yards of the capsized boat, when suddenly the engine stopped dead, just as she had risen to a heavy swell and ridden it in safety. Frank sprang to the motor and tried to remedy the trouble, while Harry held her head to the sea. Nothing could be done. The engine was dead, and there perhaps perishing, were Joe and Andy almost within reach.

“Try the starting crank!” called out Harry, not

daring to leave the wheel in the bow. Frank seized the fly wheel crank, and revolved the shaft, feeling at once that the trouble was not on the outside of the boat but that there was some trouble with the engine, which he tried again and again to start. Joe and Andy could be seen clinging to the overturned boat, cruelly lashed by the short, chopping seas of the bay.

Throwing off his coat, Frank took the starting crank in his hands, and throwing his whole strength into action, turned the propeller shaft himself. Although it was with reduced speed, the yacht slowly crept up to the boat, from which Joe and Andy let go and in a moment were safe in the yacht, but in the midst of a howling gale and a deluge of rain, which served, however, to beat down the sea somewhat. The little craft, with the aid of Andy and Joe at the engine, made slow progress toward the vessel and occasionally shipped water from the rough waves, making it still a critical situation.

"What does Mr. Purdy want? He is waving to us," shouted Joe.

"He seems to be trying to signal something," said Harry.

"Look what it is; I must hold her to the swell."

"He seems to be placing his finger tips together

and then draws one hand down from the other as though he had a string in his hand, and then follows this by a motion of the hand and arm as if he were tightening a screw."

"I have it," cried Joe. "One of the wires at the sparker of the engine has gotten out of its binding post."

And sure enough, the instant it was placed into its position again, the little engine that had been moved indifferently by hand, now flew to its work, making the boat cleave through the water with its usual ease and speed.

"Hurrah for Mr. Burdy! He always know what to do!" shouted Andy.

In a few minutes the yacht was alongside, and Joe, wet as he was, was hugged by Mr. Purdy, who beamed with delight.

"How did you know that the sparker wire was out?" asked Frank.

"I noticed that the vibration of the hull had loosened it several times while we were using it, and I tightened it mechanically without thinking any more about it," said Mr. Purdy. "When I saw you stalled out there it just flashed on my mind that that was the trouble, which it seems was the case."

"Well," said Harry, "only for your thoughtful-

ness we might have had a great deal of trouble as we simply had to fight our way shoreward by hand, but it was a tedious and dangerous job."

"Now this convinces me that we need some method of communication at a distance," said Mr. Purdy. "We will have a method whereby we can signal by day, and night too if necessary."

The capsized boat was still over a mile away. It was a good little craft and useful in many ways. They could not risk having it go to pieces on the rocks when the tide went out, so when the first fury of the squall was over, Harry took Andy with him and ran out to it, taking it in tow, and brought it safely to the creek, where it was righted and again put in order, but there were no fresh eggs for supper that evening.

CHAPTER XIX

REPORT OF THE "COMMITTEE ON PROGRAMME"

WHEN they again assembled in the cabin during the evening, the rain was descending in torrents, accompanied by a high wind that occasionally made the ship feel its power, even in her snug harbor, but as she was well secured on both sides with stout hawsers, no fear was felt that she would get into any trouble, although Harry carefully examined each one before nightfall, a custom he always adhered to.

Mr. Purdy and Frank prepared a concise code covering almost everything they might want to communicate and in this they included as much of Helen Littell's code, made for Joe, as they could use. Everything was expressed by a number, while the numbers were made by the hand or anything that could be held in the hand, such as a handkerchief or a branch, or in fact anything that might readily be seen. There were no complex motions to be remembered. It was simply a matter of counting. The hand, either empty or with the object it

might have in it, was held over the head, and then swung at arm's length down about as low as the hip and immediately returned to above the head. Once down and back meant “ one,” two motions meant “ two,” three motions meant “ three,” and so on, until all the numerals could be made that might be wanted. The numbers to be used were of two figures, thus: the hand held overhead and dropped at arm's length once and then returned overhead for a second, then dropped three times indicated “ 13,” which on the code meant “ Send the yacht,” and so on. All the situations that could be thought of, were embodied in the list. It was seen that twenty numbers covered about all they now needed. In case of necessity, the alphabet itself could be written out and numbered letter for letter and then transmitted slowly. Before they retired for the night, the entire party were thoroughly drilled and each understood the manual so that it could be used at once.

“ The best and quickest method,” said Mr. Purdy, “ would be for each to thoroughly learn the Morse telegraph code and transmit that in similar manner, but that would burden the memory, whereas this does not, although it is slower.”

They had often felt the necessity of something like this, but owing to the many other matters they

had to engage their attention, it was not acted upon until now. When the party retired for the night the storm was still howling through the rigging, accompanied by heavy dashes of rain which continued the entire night. The next day there was no abatement in the rain which now and then seemed to slacken only to resume in a short time. There was that day a discussion as to the advisability of building a boat when the wet season ended, for the purpose of escaping from the island. This needed to be one capable of carrying the entire party if necessary, and with safety through these seas, as it was very evident the yacht could not be used for the purpose. Theoretically the boat could be designed in detail, but practically they all admitted they were not ship carpenters enough to attempt to build even a fair boat. However, they intended trying it as soon as circumstances would permit, but Harry said then, that even though the boat were built he would stay with the ship until help arrived, which would come one way or other soon. He thought that they could not be entirely out of the track of vessels, and as long as the ship remained it seemed his duty to stay with her until it was absolutely certain that help would not reach them. There were still some of the balloons to be sent out, and as the winds were now

blowing very strong, it was thought that the chances were good for having them driven over a greater space. During the afternoon two more were gotten ready and sent off. The first rose swiftly and catching the influence of the wind, rapidly made its flight to the northeast and was soon lost to sight. Then another was sent out just before sunset. This one took an easterly direction and soon disappeared. It was supposed that they had a sustaining power for at least thirty-six hours, during which time they might make a thousand miles.

A sealed tin can like the one attached to the first balloons sent out some weeks before, containing an account of their wreck, was also attached to these, with all instructions as to placing the matter into proper hands, if found. In like manner cans were prepared and set afloat after being marked so as to attract attention. These latter were sent out almost every day and sometimes they kept in the vicinity of the island for days at a time.

The Committee on Programme for entertainment during nights of the stormy season consisted of Harry and Frank. They made their report one evening shortly after the balloons were sent out, presenting the following, which was adopted unanimously:

REPORT OF COMMITTEE ON PROGRAMME

FOR

NIGHT ENTERTAINMENTS

To be given on Board

RED CROSS LINE SHIP

KATHARINE

At Hudson Island, Season of 1894.

These entertainments are free. The public will be welcomed. Each entertainment will last about two hours. Dates to be announced on small bills.

No. 1.

| | | |
|---------------------------------|-----------|--------------------------|
| Music—Guitar and Mandolin Duet, | . | Messrs. Purdy and Miller |
| Feats in Magic, | | Mr. Robt. Purdy |
| Closing Song, "America," | | By the Company |

No. 2.

| | | |
|---------------------------------|-----------|--------------------------|
| Music—Guitar and Mandolin Duet, | . | Messrs. Purdy and Miller |
| Marine Engines and Propellers, | | Mr. Frank Miller |
| Closing Song, "Suwanee River," | | By the Company |

No. 3.

| | | |
|--|-----------|--------------------------|
| Music—Mandolin and Guitar Duet, | . | Messrs. Purdy and Miller |
| Ships and Their Kinds, | | Mr. Harry Henderson |
| Recitation, "Casabianca," | | Mr. Joseph Henderson |
| Closing Song, "When Johnny Comes Marching Home," | | By the Company |

No. 4.

| | | |
|---------------------------------------|---------------------------------|--------------------------|
| Music—Mandolin and Guitar Duet, | . | Messrs. Miller and Purdy |
| Electricity in the Twentieth Century, | | Mr. Robt. Purdy |
| Song, "Lichtbutshaar," | | Mr. And. Spiegelmier |
| With chorus accompaniment by | Mr. Tobee, of Cape Town, Africa | |

The Committee further announces that other entertainments will be held from time to time.

In each of the foregoing the lecturers will illustrate their ideas with blackboard drawings, or instruments, etc., as occasion may demand.

| | | |
|---------------|---|-----------|
| H. HENDERSON, | } | Committee |
| F. MILLER, | | |

The programme was neatly printed with pen and ink by Frank, and suspended in a prominent place in the main cabin. The only musical instruments at hand being the mandolin and guitar, they were detailed to the orchestra work each lecture evening. All other nights were to be devoted to study or work as the case might be.

One thing that confronted the party now was that their supply of coal for the cook's galley was gradually being used up and this would leave the hoisting engine without fuel in the course of a few months. Their lamps were also using about four gallons of oil a week and there were but two more barrels of kerosene in stock; this would make about one hundred gallons on hand, or about six months' supply. Mr. Purdy, however, proposed, as soon as the wet weather closed, that they should set up a small dynamo to run by power derived from Singing Falls. This would give them all the light and heat necessary. There were some small ones in the cargo with every appurtenance, even the engines, but he proposed to dispense with the latter and use water power.

"Where will we place the dynamo?" asked Joe, who was full of enthusiasm at the project.

"Right out there on the point, about fifty yards

from the *Katharine*. It will be a question whether to conduct the water from the Singing Falls to this point, or whether we set up the dynamo near the foot of the Falls and bring the current to the ship by wire. There are two ways to look at it. The first method will take water pipe from the lake to the shore, but then we have the dynamo right in sight and can attend to it as needed. The second method will dispense with much piping, but the dynamo will be away from us and practically beyond control unless some one stays with it. We, of course, would use storage batteries and thus do away with night running by charging them, in either case. We have everything we need for the installment of the plant."

"And shall we have electric lights on the ship the same as in our home in Brooklyn?"

"Yes! and more than that; we will do all our cooking too. We don't need any heat, or we would also heat the cabins, but will use it anyhow in damp weather. In fact, there are some experiments we may want to try which may be interesting. When we once find it irksome to distill naphtha we may be able to convert the *Edna* into an electric boat."

"How will you get the power from the Falls?"

"We will not use the Falls but will take it from

the lake above. When you made the last trip to the west coast you remember I remained here, and at that time I measured the vertical height of the lake above the creek and find that we can have a water head of one hundred and seventy-one feet. This will give us a water pressure of seventy-three pounds to the square inch; that will be plenty strong enough.”

“ And how will you utilize this? ” asked Frank.

“ Well! if we can make it answer our purpose, we will construct a Pelton water wheel, which is simply a wheel with rim buckets and we will deliver the water to it through a nozzle. This simple wheel is doing wonders where water is plenty and sufficient fall can be had. Otherwise we will have to put in a turbine wheel, of which we have two sizes among the machinery in my consignment. I calculated that there is water enough escaping from the lake, over the Falls, to supply a city of over a hundred thousand population with all the arc lights they would require, as well as all the incandescent lights they needed for business purposes, say fifteen thousand, sixteen-candle power lamps, as well as some hundreds of electric motors.

“ Will it take much work to get this into shape? ” asked Joe.

"Yes! it will take time, and considerable work, too, but in the end we shall be so much better situated. We shall constantly have powerful arc lights illuminating the ship, that will be visible seaward for miles, and may bring assistance that might otherwise pass without ever knowing the island is here; for we are not at all certain that ships have not already passed here in the night. However, we will wait and hold a council of war before engaging in it. Our captain," turning to Harry, "has the most to say in such matters."

"And he will join in most heartily," said Harry.

So it was resolved that just as soon as the weather permitted, electric power should be used, as suggested by Mr. Purdy.

Thus the time passed on board of that imprisoned vessel. The first entertainment in the course was held and conducted the same as if an audience of hundreds were present. Mr. Purdy had been busy for some days in constructing apparatus for his "Feats in Magic," in which he really excelled. He always carried some smaller apparatus with him and now put it to good use.

"Wot is de use of going out and upsetting de sailboat in a sthorrum and getting drowned nearly for eggs, when Mr. Burdy can shake dem out of a

shnoop duch so fast as he wants dem? Des beat alles!” said Andy.

Everyone laughed at Andy’s sally; even Toby felt it incumbent upon him to join in the merriment in some way and walked in and out among the audience and barked loudly, but soon Mr. Purdy borrowed Andy’s derby, which was as big as a policeman’s helmet, for the audience came in their best and he had reserved this black derby (it was black once, but age had colored it somewhat of a greenish tinge) for shore duty. When Mr. Purdy borrowed it and, showing it to be absolutely empty, in an instant took therefrom all sorts of things, including several doll babies, each one in itself almost large enough to fill the venerable hat; then following this with fancy balls in such profusion that they partly filled a waste paper basket, and finally took one large black cannon ball from the same source without ever taking the hat from the table:—when he did all this; Andy forgot all proprieties and shouted:

“ Donnerwetter! was ist lets mit mein hute?”

But the imperturbable Purdy, who understood German, told him there was nothing wrong with the hat, and jokingly added that Andy was not the first man who had “ things ” in his head.

And so the evening passed, with many more interesting feats in legerdemain, closing with the grand old hymn, "My Country 'Tis of Thee," in which all joined. Who could know the heart yearnings of those castaways as they sang!

When they retired for the evening, they all felt better for the joy of it and looked forward to the time when Frank's lecture on "Marine Engines and Propellers" would be given, for which he was preparing as earnestly as if it was to be delivered at a meeting before the Cooper Institute.

During lulls in the stormy weather, Frank and Joe went ashore and provided game for the table and with this, several delicious fruits which abounded on the island. These trips were generally short as it often rained the greater part of the day. Andy also caught some fine sea turtles and lobsters among the rocks at the islets. This, varied with fine fish which abounded, gave the ship's company plenty of provisions. Their stock of ship's bread was decreasing so that it became evident something must be done to supply its place. Among the varied cargo was a consignment of flour intended for Hong Kong. With the aid of a good baking powder which was in plenty among the ship's stores, Harry and Andy produced some fine biscuit which was

varied with the sago bread. Cocoanuts, of which there was an endless supply, were prepared in various ways, the milk making an excellent drink. Harry showed them how the eastern nations use this wonderful tree for food, clothing, wine, sugar, and oil. It even furnished material for building and also furnished their houses. In fact, this child of the tropics in itself seemed to have in it everything that man could want for food and comfort.

When the day arrived for the second entertainment; all work was finished up early. Promptly at 7.30 P. M. it was opened with music, as before; then Mr. Frank Miller, of Brooklyn, U. S. A., was introduced to the audience by Mr. Purdy. Mr. Miller opened up his subject with a brief review of the various methods of ship propulsion dating back to the daring Phœnicians, who navigated the Mediterranean Sea and followed the African shore far south on the Atlantic. Then the various methods of propulsion from the oars and sails of these ancient galleys down to the close of the eighteenth century, when the first steamboat was made and run on American waters by one John Fitch, which was the forerunner of Robert Fulton's *Clermont*. From these to the marine engine and propeller of the

present day, including the vapor engines such as are used for light boats. By drawings he had made he illustrated the workings of the compound engines which use the same steam, even to the third and fourth time. Then followed the condensing process, high and low pressure engines; illustrating how engines were connected to the propeller shaft, giving a description of the propeller itself in its different forms. He told of the history of the paddle wheel with which ships were once equipped; then of the screw propeller, which is now the recognized method of propulsion, explaining the meaning of its "pitch" and "slip," following this with references to other methods of driving boats such as pumping water with the powerful steam pump, taking it in at the bow and discharging it at the stern. Also the cylinder propeller which acted directly against the water like the piston in a steam cylinder. Then the methods and advantages of expansion were explained as compared with the old and wasteful method of using steam at full stroke. He finished by venturing a prophecy that ships would cross the Atlantic in four days or less, within the next twenty years, basing it upon the progress made within the past twenty. The audience was much interested and applauded the lecture heartily. They then sang the

good old home song, “ Suwanee River ” and closed the evening’s entertainment.

The rain still fell daily and at times the sea was very tempestuous, but in her safe harbor the *Katharine* was never affected by it. Only when the gale would sometimes catch her bare top rigging, would she make a slight roll, but otherwise lay quietly at her anchorage. The day following the lecture the fourth and last balloon was sent out just about sunset. The wind was very high, carrying it out of sight in a few moments of time. As there was not a chart on board, they could only guess at its line of flight, even with their fairly correct reckoning.

When the weather permitted, Frank and Mr. Purdy made a measurement of the distance from Fairy Lake to the mouth of the creek, finding it to be just three thousand feet from the lake to the shore. When this was completed, the hatches were opened and bundle after bundle of two-inch pipe was hoisted out to the deck, until there were two hundred and fifty pieces of twelve feet each on deck by noon, with all necessary couplings. The rain now compelled them to quit work for the day, but the next morning the boat was loaded with all it would carry; then in tow of the *Edna*, it was taken up to the Singing Falls and unloaded. The next load was

landed at the same place, there now being more than enough for the slope leading up to the lake. The third lot was scarcely loaded when the rain compelled the workers to seek shelter and no more was done that day. In this way, by working a few hours daily, when the rain did not interfere, our voyagers gradually distributed pipe over the entire distance, waiting only for the wet season to cease in order that they might commence coupling it up in a continuous line.

But while all this was done their entertainment course was strictly adhered to, it being recognized by all that at no time must the days hang heavily on their hands. When the third entertainment was held, Harry told his audience many wonderful things about ships and other various kinds, relating many interesting facts he had come across in his sea life, but admitting that of all the wonderful stories of wreck and miraculous escapes from destruction, there was none more wonderful than their own.

After the lecture, which the appreciative audience thoroughly enjoyed, there was a comic recitation by Joe, entitled "Casabianca." Frank had secretly taken the original and made a parody on it to suit the present situation. Then Joe committed it, and recited it, much to the amusement of all. The even-

ing concluded with the song " Johnny Comes Marching Home," also adapted by our versatile friends.

It was a constant warfare against anything that tended to homesickness. Among that company there was not one who did more to prevent it, and no one knew better than Robert Purdy, the terrible consequences of nostalgia, which, under any other mode of life, would threaten them. But often in the still watches of the night his iron nerve almost failed him, as he thought of his dear ones, now mourning him for dead.

CHAPTER XX

A MYSTERIOUS COLUMN OF SMOKE

HOWEVER, hope is strong in the human heart. While our voyagers were making preparations for their comfort, they also left no stone unturned, no device untried toward making their escape from the island; nor had anything been left undone in the way of attracting the attention of vessels that might pass either in the day or night. Especially for the latter purpose was it desired that the dynamo should be installed. Everything that could be done during intervals in the rainy season was pushed to the utmost. In the meanwhile, it was ascertained that the dynamo would do better with a Pelton wheel for a motor. This was constructed from material taken from the cargo and gotten in readiness. Nothing could be done toward installing the electric machine until the weather was absolutely dry, and even then a moisture proof shed must be built for it. The building designed was about five feet square. This was constructed from the hoisting engine galley,

which could be taken to pieces and built into the desired form. A frame work for the water wheel was necessary, but as it was impracticable to construct one from anything they had, Frank hit on the idea of placing a strong frame work, made from coconut trees on the side bank, and mounting the wheel in this, with the dynamo just above it in its small galley.

Trees were felled and sawed to proper lengths for uprights and frames. These were composed of four powerful corner posts, framed into a top and bottom frame about five feet square, and were set firmly in the slope, a foundation being further secured by using large stones, of which there were plenty near by. As the weather permitted, this was carried on, as rapidly as possible. The pipe was also distributed along the line, preparatory to being coupled, the latter operation being left for dry weather.

The fourth entertainment was now announced; it being a Saturday and the outside work having been carried as far as possible, the party were glad to rest. That evening the exercises were opened as usual by music, after which Mr. Purdy commenced his lecture "Electricity in the Twentieth Century." He opened with a retrospect, in which he spoke of the first great experiment by Faraday, in producing an

electric impulse by simply passing a closed copper circuit through a magnetic field, which was the inception of the dynamic electric machine of to-day. Illustrating it as he proceeded with a simple wire loop connected to a small galvanometer, and this was merely passed between the ends of a common horseshoe magnet, making the needle of the galvanometer move aside each time it was done. This latter simple instrument, which was only an ordinary compass with several coils of copper wire wrapped around it, and these two ends connected to the two ends of wire forming a small electric circuit or loop, and then passed back and forth through the magnetic space between the poles of a magnet, produced an electric current, but why, no one could explain satisfactorily.

There existed in that space in dynamos millions of "lines of force," passing from one pole to the other; this science demonstrated, but it could not explain as yet why these millions of invisible lines of force, when disturbed by a moving copper circuit, should produce an entirely *different* force which we now call dynamic electricity. He dwelt on this particularly, because it was the germ of the dynamo, then continuing:

"From that experiment, made one Christmas

morning over sixty-five years ago, sprang the machine that illuminates our streets, brightens our homes, propels our street cars, sends man's messages from one end of the land to the other. It will do our cooking and baking; is one of the surgeon's best allies in making a delicate examination, yet picks up the heaviest locomotive and carries it from one end of the shop to the other. The gold plater uses it for his beautiful work; the rock driller in far off galleries in mines has it at his command for the rough work. In an instant it illuminates the great light towers in cities making, as it were, a perpetual moonlight, and is almost as readily used by the deep sea diver to lighten his dismal work. The machine does not make electricity, it simply converts it from some other form. Nature formed coal from vegetation through the agencies of light and heat. The dynamo takes this coal and again returns it to light and heat. We can calculate its capacity, measure its power, and have all the mathematics of electric machinery down to a fine point, as to results, but as to the true nature of the mysterious power itself that is released or converted by this wonderful machine, we know nothing. We speak of it as a 'fluid,' but nothing flows; again we call it a force, but nothing moves. It is a mystery; so

is magnetism. We may figure and calculate in mathematics that may make the mind swim, and arrive at correct conclusions as to its actions and results, and yet we do not know what it is, nor whence it comes. It is one of the forces of the Almighty, that we are allowed to have and use, and who knows but there may be others that will be known to future generations."

He then went on and described the action of the direct and alternating current generators. The former sending its current in rapid pulsations in one direction, while the "alternator" rushes its pulsations back and forth so rapidly that, like the direct machine, the current is practically without a break in either. The volt, ampere and watt as units in electric action, were explained, as well as the ohm, the unit of resistance. He then pictured the twentieth century as it might appear near its end, showing how "people will turn on music with an electric button, swift flying trains will dart over the land at phenomenal speeds. Not only will the human voice be carried across land and sea, but views will be transmitted, showing moving life. Street traffic will be conducted without horses; telegrams will be transmitted through air or water, without the intervention of wires. The steam engine will be

superseded, except for a while as a motor, and even then will be discarded for more direct methods of producing electricity. Ocean steamers will be run by fast running and powerful motors, carrying their stored power with them instead of ballast and fuel. All these will be actuated by this wonderful force of which we know so much and yet so little. Unsightly wires will disappear from our thoroughfares, being replaced by metallic ribbons laid in conduits, separated only by an insulating substance like asphalt. There will be no more electric accidents in the streets. Nature's lightning, instead of being feared, will be captured and stored for man's use. Our present methods of lighting will be crude when compared to those in use at the close of the twentieth century. The storage battery will be perfected so that it will not occupy more room than the boiler and fuel space of vessels, the pilots of which will also control the motor by simple levers. Vessels will be charged as they lie at the wharf taking on cargo. Public roads will be perfected so that swift-flying electrical machines may travel on them, buying their current at different places, as they now might buy horse feed. Submarine boats will be brought to perfection by its use. Great machine shops will run noiselessly; not a belt will be seen or used, each ma-

chine having its own motor. Power will be centralized near the great fuel or water power centers, where electricity will be generated and sent abroad for a thousand miles with little loss, economizing fuel by burning it, as well as waste, at the mines. Steam railroads, now using the sprightly, but wasteful, locomotive that develops but ten per cent. of the power of its fuel, will change their machinery to electric power. Illuminating gas will be known only as a curiosity in laboratories. In short, it will revolutionize the mechanical world and contribute much to man's happiness, by ministering to his wants on all sides, from sterilizing the infant's milk to instantaneous cremation when death at last calls him to rest. It will be difficult to enumerate its uses; necessity will create new ones of which we, at this age, know nothing, and I doubt that even then whether man will know the true nature of this faithful and intelligent servant."

Long and loud was the applause given to this interesting talk, which was then followed by Andy, in his dialect song, entitled "Lichtbutschaar." This had a chorus attached to it like a repetend to a decimal, and always created a hearty laugh, especially when the dog whined his part in the song. After this Master Toby was put through some surprising feats

by Joe, while the orchestra was playing soft music; then the fourth entertainment ended, all well pleased and instructed by the various exercises. So the evenings passed; often while the storm was raging over the island.

In addition to these amusements Joe's studies were pursued, and especially did he excel in mathematics and navigation. Sundays were always observed with divine service and made a day of rest from their work. Thus, when the rainy season drew to a close, it found our voyagers in good health and spirits, ready to meet the difficulties before them. Full of hope for the future, confidently expecting to reach civilization before another wet season set in, and with the hope of finally rescuing the *Katharine* from her too safe harbor.

It was now painfully evident that Hudson Island was not near to the beaten track of vessels going to and from the East Indies, as not a sign had been seen of one since their arrival there. They had never seen any evidence of neighboring lands, although the horizon on all sides had been searched with their splendid ship's glass whenever the weather was favorable. Once they discerned on the northern horizon a dark smoke rising column-like in the still air. It was not of more than an hour's

duration, and the distance was difficult to judge; after awhile it died out and was seen no more. Mr. Purdy and Joe thought it a steamer below the horizon, but Harry thought not. If it had been and was in motion the column would not have been vertical, but would have trailed after the vessel. On the other hand, if it were a steamer at anchor, it was not likely there would be such columns of smoke ascending for almost an hour, indicating a wasteful consumption of coal. No! clearly it was from some other source.

"It's my impression," said Harry, "there is an inhabited land up there, and we have to-day seen smoke made by its inhabitants."

"Why not a volcano?" asked Joe. And yet that theory hardly seemed tenable either, as a volcano would be likely to smoke more than one hour. So various speculations were indulged in for a few days, then, not seeing it any further, it was almost forgotten in the work before them, as the rainy season had now closed. The island was donning the brightest green on all sides. Birds of different kinds enlivened the forest. All Nature seemed to rejoice that the tempests had ceased. The angry ocean no longer threw its thunderous billows against the outlying islets and the island was again at peace.

Work on the electric light plant was commenced. The water wheel was hoisted out and by means of tackle, was put ashore without difficulty, as the vessel was still in the creek and near the banks. Then the small shed, or cabin for the dynamo was constructed so as to be perfectly water tight and firm. It was desired that the pipe line should be laid in position before the dynamo was placed; so operations were commenced at once. Armed with pipe tongs and wrenches, the party, under direction of Frank, commenced at the foot of the falls and joined up the pipe that had been distributed during the rainy season. With a little grease the threads had been protected from rust, so that the work went along finely; the whole line being complete from the power house to Singing Falls in about five days. The remainder was then taken up the slope to the lake and firmly secured, the last length being laid in a box in one of the small streams flowing out from the lake. A large globe valve was inserted at the power house, enabling them to stop off the water any time without emptying the pipe. At last all was in readiness, and the party adjourned to the lower end of the line; then the valve was opened. With a loud hiss the compressed column of air rushed from the pipe, and in a few minutes the water arrived and

instantly set the wheel in motion, soon reaching a high speed.

"This does one thing more for us," said Joe. "We are getting pure water without having to go to the falls for it, and the tide keeps the creek mixed with salt water all the time."

The dynamo was now hoisted out in its packing case, and with it all the cases containing the armature, rheostat, volt and ampere meters, with all connections. Like toys the weighty boxes were sent up by the steam winch, swung over the side and deposited right on the spot desired. As soon as the field pieces were hoisted over and placed in position, and the armature set in place, the house was finished so that no moisture could affect it. While Mr. Purdy was making the connections, he also gave directions to the others for arranging the wires for temporary wiring. The mains were carried across to the vessel, from connections that could pull out without damage, should the vessel move with the tide. The dynamo had a face plate on it marked

8 Kilowatts
110 Volts. 600 Rev.

"What does 8 kilowatts mean?" asked Joe, pointing to the plate.

"That means eight thousand 'watts.' A 'watt'

is the unit of power. It takes 746 watts to make one electrical horse power, and as there are in round numbers 50 watts to each 16-candle power incandescent lamp, you will see that this dynamo has a capacity of 8000 divided by 50, which equals 160, which is the number of 16-candle power lamps it can sustain. If you will look at the lamps we have over there in that barrel, you will see each one marked 3.1 watts, which means three and one-tenth watts to each candle power, so that the ordinary 16-candle power lamp will take in power forty-nine and six-tenths watts, or, as I said, in round numbers, fifty watts."

"Can't we use arc lights on this machine?" said Joe.

"Yes! we will have several; in fact, we want to make that the chief output of the machine," said Mr. Purdy, "as we shall not need many small lights for our use, so that while the current is being generated, we must continue to have it taken up mostly by the arc lamps, until we get our storage batteries charged; then we will use it as we wish."

So the work went on; when evening came there was still much to do. The dynamo was securely covered for the night, and the workers went aboard for their supper, which Andy had prepared. The

following day everything was in readiness by noon. There were eight arc lights, one pair on the foremast, another pair on the mainmast, two more on the mizzenmast, and two lights on the deck. In addition to this, there were twenty lamps of 32-candle power distributed in the cabins and on deck. In fact, there were too many, but for the present they had to give the dynamo something to do in the way of work. When all was in readiness, Mr. Purdy called to Joe to turn on the water; then the armature began to revolve rapidly and sing its song of motion. In a moment more the pilot light on top of the dynamo showed a dull red color, then it grew stronger and stronger, until a bright horseshoe of light showed; then with the rheostat set to balance the current, the switches were thrown over. The arcs clicked as they adjusted themselves to the life that was now coursing through their solenoids and flashed out a white diamond light, even in the tropical sunbeams that reflected from the clear glass globe, while the incandescents rose to the occasion grandly. The Singing Falls sang a new song as that armature translated it into tones of light.

“Hurrah! Hurrah! for our plant!” cried Joe.

All joined in and cheered with a hearty good will. Toby of course, barked and rejoiced in his own way

as he always did when anything was going on. Inasmuch as the day was bright with sunlight, it was not necessary to run the plant longer than to give it a good trial, so it was shut down until night.

“Mr. Purdy, please come here! This rheostat is quite warm,” said Joe, placing his hand on the wire netting on the sides. “What causes that?”

“That is simply some of the current required to magnetize the fields going off in the form of heat. You see the dynamo has a capacity for a certain pressure of current. Now this rheostat or resistance box which you see has about one cubic foot of space inside and is filled with coils of German silver wire. They look like long springs, about as thick as your little finger. On the outside is a brass handle that you can move around so as to throw any number of them into the circuit of the fields, and German silver is a poor conductor of electricity, so that in controlling the output of the dynamo about three per cent. has to fight its way through this lot of poor conductors, and produces heat, just as driving a nail through wood produces heat, or pulling a string through your closed hand will produce heat and burn it. On this principle are made electric heaters, surgical appliances, cooking and baking apparatus. The light itself is caused simply by a strug-

gle for the current to get through the carbon filament in those closed glass lamp bulbs, and these would burn out instantly if they were not in a vacuum and cannot burn for want of oxygen. But you will see more and more in this magnificent machine as you study it, and always remember, my boy, that it is one of God's powers that he has permitted man to use. I have a reverence for it, for it brings to my mind the words of Paul:—

“ ‘ Eye hath not seen, nor ear heard, neither have entered into the heart of man the things that God prepared for them that love Him.’ ”

CHAPTER XXI

JOE'S ELECTRICAL COMPANY

IN addition to the conductor to the Pelton wheel, Frank made a small connection to the main pipe, to which a rubber hose was fastened and brought on board, furnishing them with pure and fresh water constantly for all purposes. Andy especially, was delighted with it, for now he could more easily wet down the ship to keep her seams tight. It, however, occupied several days to get things in order. The wiring was made permanent and placed in such condition that the most critical insurance inspector could not have found a flaw in it. Switches were placed at points where most convenient. Joe was taught how to "trim" the arc lamps, the beautiful compensating mechanism of which he studied until he mastered it.

"But the carbons—after we once use ours in the cargo, where will they come from?" he asked.

"Why! Joe, we have the material right here on our island," said Frank, "over in our oil still. After

all the crude oil has been evaporated and condensed into naphtha, kerosene, and lubricating oils taken out, there still will remain a coke from the sediment in the oil. From that coke are made the finest carbons. In some respects this mysterious crude oil bears a comparison to the palm tree for utility, each has so many uses."

Harry rigged an arrangement by which Joe could lower the mast lights to convenient places for trimming. Andy also attended to them at times; in fact, each one of the party was taught the entire management of this improvised electric station.

"Let us form a company and issue a prospectus something like this," said Joe one day, after he had written it out:

"HUDSON ISLAND LIGHT & POWER CO.

"H. Henderson, President.

"Robt. Purdy, Consulting Engineer.

"Frank Miller, Superintendent.

"Andy and I will be dynamo tenders and line-men. I think we can dispose of all of our stock."

"Who will buy it?" asked Harry.

"The inhabitants of the island, I guess," said Joe, pointing to a couple of monkeys, springing from branch to branch of some adjacent trees. "They

seemed to take considerable interest in our new enterprise. If Toby wasn't so rude to them, I think they would often come to see us."

In fact these simians had grown to be so common a neighbor that they began to be troublesome, and, only for Toby's vigilance they would often have picked up small articles and decamped. They did succeed in carrying off some. The lights attracted them at night, as well as a multitude of insects and night bugs that passed all comprehension for oddity of appearance.

The ship, under the new method of illuminating, was more cheerful to the little crew, but as yet the light was not used all night long, as it was not desirable that one of the party should remain on duty all night to watch the dynamo. They shut down at midnight and used a ship's lantern until morning, adhering to this plan until their storage batteries were ready for use. As soon as these could be placed in service, work was to be commenced on the boat, which Andy volunteered to construct, if the necessary lumber was furnished. He thought it might take two weeks or more, so one day, while Mr. Purdy and Joe were working at the storage batteries, Harry took the *Edna* and searched along the shore of the bay for suitable trees for the lumber. The boat was

designed thirty feet in length, with a single cat rig sail; then decked over, having a small cabin in the middle, with ample living accommodations for a crew of five persons. Whether they could construct a suitable craft remained to be seen. None of the party had been engaged in a matter of the kind before, so it became somewhat of a problem just how to proceed. A safe and substantial boat was what they needed; not a temporary affair that would answer in a quiet sea, for it would no doubt require many days of sailing to reach a land from which, even then, they might not get any help; however, Andy thought if the keel were once laid he might finish it.

About a mile north of the ship Harry found several teak trees, which gave promise of furnishing the necessary material. Three of these were afterward cut down and trimmed of their branches, then sawed into lengths and rolled into the water for towing to the creek. When they arrived there, they were hoisted on board the ship and carefully sawed into boards. It was tedious work, but had there been more of it, a temporary sawmill could have been rigged to be worked by the electric current. In a week's time there arose on the *Katharine's* deck a pile of lumber that was ample for the purpose re-

quired for the hull, with the exception of knees, but this could not occasion much delay, as our explorers had seen just the timber suitable for that purpose on one of their trips to the northwest near the head of Fairy Lake.

The keel was laid at a suitable place on the Point that was safe from the tidal changes, and then Andy commenced operations, while Frank and Harry took the yacht up to the falls, where they secured her and followed the lake to its head. From here they took the direction of their former trail, which was almost completely obliterated by the rapid growth of vegetation in this climate. It was finally lost altogether, but they found some of the trees they sought and felled them, securing four good pieces for the knees and ribs. These they took back to the lake and placed them near the shore, intending, when enough were cut, to throw them into the water and float them to the lower end, and then again after carrying them over the slope, float them down the creek. By four o'clock they had cut and moved about a dozen to the lake; fastening them together they formed a raft, which was towed along to the falls, from which place they were towed to the ship. As their boat must not draw over four feet of water, they had no difficulty to get them shaped and set

into position. In another day they secured all the heavier timbers necessary and placed them into position as far as possible, so that Andy could go ahead with the remainder until the hull was decked over, and this would take another week at least.

While the timber was being cut, the storage cells were gotten out of the hold and placed in position in the empty forecastle. Mr. Purdy, with Joe's assistance, moved the weighty cells with a tackle they had rigged and then prepared the plates. In a couple of days the dynamo was started up and began charging the battery, which was ready for use about the same time the last timber was brought in, so that night the arc lights on the mizzenmast were sustained from midnight until morning by the new process. They now had to wait for the boat, which would yet take considerable time. While this was being done, it was arranged to visit the western coast, to look after the beacon, which was still in place, as well as to make further explorations to the north of Fairy Lake. Providing themselves with everything necessary that could be carried for a trip of two or three days, the entire party, with the exception of Andy, set out on the yacht, which took them about a mile to the north of the *Katharine*, where a landing was made. Bidding Andy good-by,

they struck into the forest, moving toward the northwest. The weather was warm, but, with forest shade and the tempering sea breeze, they suffered no discomfort. Toby was in his element again, rushing here and there through the forest, creating consternation among the smaller game, but he met a disastrous defeat when he happened to encounter a porcupine, of which there seemed to be plenty on this end of the island. He charged upon it valiantly, but was ingloriously repulsed, after having been treated to a lot of its quills, which so pained him, that he was glad to have Frank and Joe extract them. These little animals being esteemed a great delicacy, Frank made a note of the place, in order to shoot a few upon their return. About noon the party halted for dinner and a rest, as their progress at times was difficult, on account of the tropical undergrowth. They saw on their route many birds that they had seen in the southern part of the island, and some few deer. While they were taking dinner their attention was drawn to a singular growth on a tree close by; it being attached to a limb about thirty feet from the ground, looking like a large, semi-circular body of some inches in thickness.

“I do believe that’s a honeycomb!” said Harry.
“While I never saw one, I know that bee hunting

is carried on to a considerable extent in some of the Timor Islands, and have been told how they build."

Moving nearer to the tree, they were surprised to see that the color of the object was caused by thousands of bees at work on a monster comb attached to a limb. These bees needed no winter shelter, so could work and live in the open air.

"What a pity!" said Joe, "that we haven't the necessary appliances; I should like to try to get that down."

"But even if we had them," said Harry, "it would still be a difficult and dangerous experiment. The natives who cut them down go up bare armed and bare legged with a smoke torch and stupefy them, and even then they must get some stings, but they don't seem to mind it. I think these bees would make us pay dearly for all we might get from them, for they are resentful creatures."

So it was agreed to let it remain for a future excursion when ropes and smoke torches would be taken along. After dinner had been eaten, the party again took up their march to the west. They had now gone about half the distance to the coast and had not yet crossed the ridge that stretched away to the north from Mount Hope. This elevation became less decided as it approached the northern

coast, where it terminated; their northern beacon standing on the extreme end, the other being Mount Hope itself; the ridge stretching like a diagonal across Hudson Island from southeast to northwest like a huge backbone; Oil Creek having its rise on the western side, while Fairy Lake was fed from springs and streams on the eastern side. About two miles to the northwest of Fairy Lake, they suddenly came upon a large wall-like obstruction stretching across their line of march. Mr. Purdy, who was in the advance, shouted to the rest to hurry along as he had found something to interest them. Pressing forward they found that it was really a massive wall, hidden somewhat by the growth of young timber, but when the branches were cleared aside, it was seen that it was covered with sculptured figures, upon which our little party gazed in silent awe. Following the wall for some hundred feet to the south, they came to a large opening. This evidently was once a main gate. Entering here, they found an inner court paved with large finely cut stone from which ascended a flight of stone steps that they afterward found extended around a vast rectangular floor. These steps were overgrown with small trees and other growth, that were slowly but surely forcing many large stones from their beds in

the floors and steps. When they reached the upper floor they beheld the remains of what was once an enormous temple, or a series of temples arranged along the sides of this mammoth plateau, paved with magnificent stone; evidently once the resort of thousands of worshipers. The walls still remaining were covered with exquisite sculpturing, showing that the artists were masters of their calling. Everywhere the same high order of art was displayed. Everything arranged with mathematical nicety, but now standing, in silent evidence of a people long since passed away, of whom there was not a record visible, beyond the mute sculpture left behind them on the massive stone. For a moment not a word was uttered as our explorers stood in wonder, gazing at the sight before them.

"The work of a forgotten people!" said Mr. Purdy, "and now we can account for the paving at the lake, for this proves our surmises that it was built for a reservoir. Who knows for what purpose it may have been used?"

"These no doubt are the works of a people who were contemporary with those who left such grand ruins behind them in Java, where they exceed anything that is to-day found in India or even Central America," said Harry, "and while their extent is

vastly greater their finish is equally beautiful. They left there ruins of palaces, temples, aqueducts, baths, and even fortifications."

"Do you think this mighty temple was used only for the people of this island?" said Frank. "It seems to me that inasmuch as we haven't yet found other traces, this island might have been the seat of their worship and this temple some mighty shrine to which pilgrims came. No doubt the same people built the wall around the oil spring, too."

"I wonder what they did with that oil?" said Joe.

"Perhaps they were fire worshipers and used that in keeping up the sacred pyre," said Harry.

So they conjectured and marveled as they came across new wonders at every step. There seemed to be a great number of smaller temples around the outer edge of the great stone rectangle, while in the center there evidently stood at one time a grand dome. Sculptured figures, that had in many instances, fallen from their places, lay scattered around among fallen columns on this mighty area, yet not a hieroglyph was visible among the exquisite stone carving to throw any light upon the history of the lost race.

"No doubt," said Mr. Purdy, "there are many

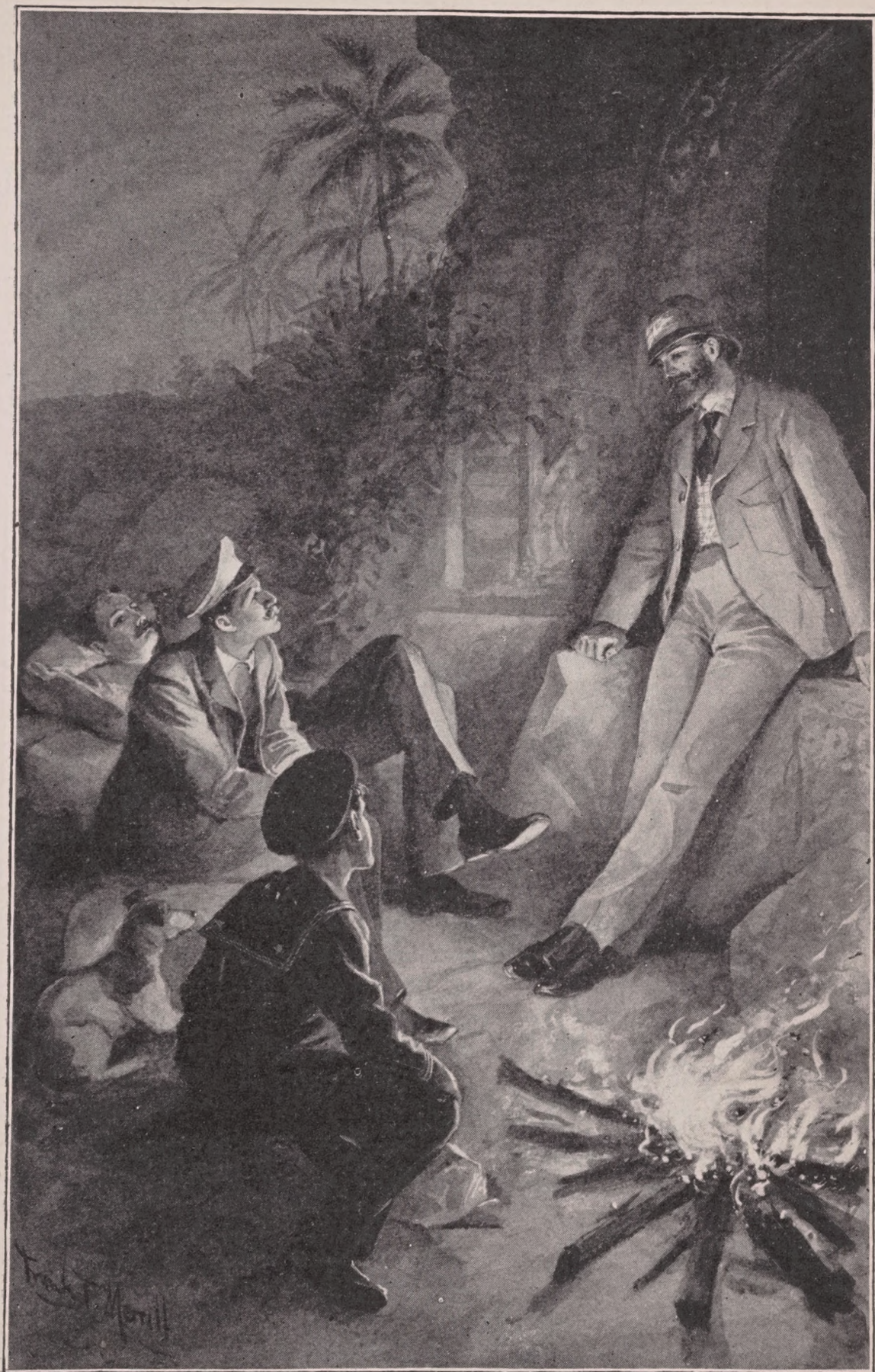
more ruins on the island. We have thus far made only a few trips across the interior which we know is quite extensive. I do not doubt at all we have even then moved over some of their stone causeways, but could not see them on account of the vegetation covering the stone."

They remained here until the lengthening shadows warned them that evening was close at hand.

"Let us stay here for the night!" said Joe. "We can't make the west coast anyhow before the sun sets."

"A good idea!" said Frank. "Here we have plenty of water from our pitcher plant. What better place can we find for a camp. There are some nice places for our beds," said he, pointing to several recesses in the walls, "that look just as if they were once used as sleeping places, and here we can build our fire if we want one. This will give us a full hour more to go over the place, and I doubt whether we would see all of it then."

So it was taken as a camping place for the night. As they sat around their fire that evening with the tropical moon now almost full, filling the great areas around them with a soft, brilliant light, they wondered what kind of people once thronged these



They wondered what kind of people once thronged these courts. — *Page 198.*

courts, how far they were advanced in the arts and sciences, and then, after leaving such stupendous work behind them, how could they disappear without leaving a history of some kind engraved on the mighty stones instead of the lot of mythological figures which abounded on all sides.

“But!” said Frank, “the Mound Builders in America were no doubt a great race, too, and they left behind them many evidences that they possessed considerable engineering knowledge, especially in the State of Ohio, although their work extends to the Pacific Ocean, and yet we know nothing of them.”

“I believe it would be more proper to say that their work commenced at the Pacific and extended eastwardly,” said Mr. Purdy, “for I have seen in the possession of a friend of mine, who was a civil engineer engaged in the construction of the Northern Pacific Railroad, a piece of carving that was taken from a mound in the Mandan Indian country; that convinces me that our American Indians had their ancestors in a race that came from this country, or rather from Eastern Asia. It is a piece of soft stone, reddish brown in color, cut into an octagonal shape, hollow in the center, and about two and a half inches high, being about three inches wide at

the base and somewhat less at the top. In fact it looked like an eight-sided inkstand as it stood on the table. This stone had on the front face an archway leading into the hollow part; on either side of this opening were two cross-legged figures carved with typical Mongolian faces, their hands joined as if in prayer. On the other panels was carved foliage hanging over closed doors. On the upper face were two holes drilled down into the sides, as if to fit with pegs another piece on top, and so on until it would be completed. To my mind it was simply a section of a Chinese pagoda or temple, which was originally about a foot high, the other parts being lost in excavating. This rather convinced me that the forefathers of our present American savages came from Asia."

"But," said Frank, "our astronomers tell us that America is the old world, not the new, as our mountains would indicate. You know the American ranges are generally worn down to ridges, while in the Eastern Hemisphere they run more to peaks, not having been worn down as yet. How would you reconcile that to your theory?"

"I do not attempt it," said Mr. Purdy. "You remember I spoke of the race that Columbus and subsequent explorers found. There is no doubt at

all that America was once inhabited by other races long since extinct and who long antedated the present Red Men. It is a mystery we cannot solve, like the one before us now."

Then they turned in and slept soundly, wrapped in their blankets, reposing on their beds of dry bark, with their faithful dog on guard.

CHAPTER XXII

THE LAUNCHING OF THE "RESCUE"

THE next morning our explorers awoke just after the sun arose, all feeling singularly refreshed with their night of sound sleep. Beautiful birds were fluttering about among the picturesque ruins; all the woods seemed alive with life. While breakfast was being prepared, Frank strolled out to the edge of the great pavement and found a fine walled-in spring down on the south side, from which they drew copiously. They had good water, fresh fruits, fresh cocoanuts and sago bread for breakfast, after which the party continued their journey, arriving at the western coast during the morning. The shores were searched as far as possible, but did not show anything to claim their attention. Remaining here until after their noon meal, they set out toward the northern beacon, which was now about four miles away. The line of march lay along the cliffs of the west side, at the base of which stretched the ocean, that came up to their very foundations. Here

were found plenty of eggs as they journeyed along, but they did not take any, as the whole coast abounded with them. Shortly after their arrival at the island, Andy had taught Joe a simple method of determining whether an egg was good or vice versa, by taking one and applying the butt, or thick end to the tongue; this felt warm, and when the peak or smaller end was touched to the tongue, it felt cold, but if both ends were cold the egg would be bad. It was a necessity to have some means to detect the addled ones, as they sometimes had unpleasant experiences with them, so Andy's method, which he said was used among the farmers in the Blue Mountain district of Pennsylvania, was adopted and proved of value.

When they arrived at the northern beacon, they overhauled it and gave it a tightening, for the wind had somewhat loosened the lashing, causing it to lean slightly. While the others were engaged at this, Joe was searching the horizon with the glass. Suddenly he exclaimed:

"There's that smoke again!"

Sure enough, to the north they beheld a column of black smoke rising from some point below the horizon. This time it ascended apparently to a considerable height and now was very distinct. It

seemed to be a heavy black column from its base to most of its height when it thinned out and dispersed in the atmosphere. The party stood looking at it for a while without a word being spoken.

"If this was the first time we saw it, I might think it was a steamer coming toward us," said Frank, "but the fact that we have seen it before and in precisely the same quarter makes me think it is the work of people on some island, that is probably thirty or forty miles away."

"Maybe it's a signal of distress," said Joe. "Who knows but that our crew may be on that island?" but no one could answer as they stood there anxiously looking at it.

"How long has it been there, I wonder," said Mr. Purdy.

"It came up just as I was sweeping the horizon," said Joe. "It began rising and attracted my attention at once."

By this time it had again grown fainter and finally disappeared, leaving the party once more in perplexity as to its origin. It was almost certain that they had scanned the horizon from the ship every hour of the day whenever weather permitted it. Unless it had appeared when they were in the forest, this was but the second time it had been seen.

What could it be? Was there an inhabited land near them? If so, would not Hudson Island be visible to its people on account of the high land, especially Mount Hope, which would be visible many miles out at sea.

"Acting upon the theory that it is a signal, why not make a response to it?" said Mr. Purdy.

"That's just what I was thinking, too!" replied Harry. "Let us try it."

In a few moments a lot of dry wood was gathered and fired. When this was ablaze, armfuls of damp leaves were thrown upon it, making a heavy column of smoke. This they kept up for a quarter of an hour, in the meanwhile scanning the ocean with their glass, but without response. It being pretty late in the afternoon, they decided to camp there for the night, as they were familiar with the spot. After supper they sat around their camp fire and discussed the events of the last two days, wondering how Andy was getting along. Then the great temple occupied their conversation for a while, Frank greatly regretting that he did not bring along his camera when they sailed from New York, it having been, by some oversight, left behind.

They had just gotten themselves beds of leaves ready when Mr. Purdy discovered a light in the

north in the same quarter as the smoke they had seen during the day. Although visible to the eye, their glass showed that it was accompanied by smoke which served to diffuse it. This time it kept up about fifteen minutes, then died out. Again our voyagers answered it but received no response.

“When our boat is ready,” said Harry, “we will try to find out what it is! There is one difficulty, though, we have no compass for an extended sail; we ought to have one, as the lightning ruined our binnacle compass, and the rest were on the boats when they left the ship. Perhaps we can use Mr. Purdy’s galvanometer as a substitute.”

“We will make one,” said Mr. Purdy. “Now that we have our dynamo it will be an easy matter to make a magnetic needle which will answer in a pinch.”

Then, not deeming it necessary for a regular watch, they left their faithful dog in charge and turned in for the night.

When they awoke the next morning there was nothing more to be seen of the smoke in the north. The party soon commenced their journey to the east, intending to keep well along the northern coast which, like that on the west, rose high from the sea, while at some places it washed the bases of the

cliffs. By taking this route the sea was kept in sight all the time; at the same time it enabled them to make observations of the country as they journeyed along. Here, too, innumerable pheasants, partridges, and other game abounded as it did all over the island. The morning was glorious; the sun was bright but not too warm; a refreshing breeze came in from the glistening ocean, laden with health. The very birds seemed to feel the inspiration of that atmosphere.

"Some might pass years in a spot like this and not know or care anything of the busy outside world, if they were inclined to be selfish or wanted to live the hermit," remarked Frank.

"There are people to-day doing that same thing right in our cities," said Mr. Purdy. "They are practically so engrossed in their own affairs, that they have no time or sympathy for anything else. But what a paradise this would be for people who are in delicate health; the best air, filled as it is with ozone; water that is purity itself,—fruits, flowers, birds and sunshine; what more could they desire?"

"Yet one thing more," said Frank.

"What is that?"

"Big game!"

Whereupon they all laughed at Frank's amendment, well knowing his shooting proclivities.

"Wouldn't this be the place for Mrs. Littell! I believe she would recover her health here. The Samoan Islands can't be better. I wonder how they all are!" said Joe. "We've been on the island since the beginning of the year and it's now the tenth day of October."

"Just one year ago to-day we left New York," said Harry.

For a short time nothing more was said. They had never let the fact of their exile intrude upon them, keeping themselves busy at anything that would engage the mind, but now Joe's innocent hand had drawn aside the curtain and showed them the reality of their position.

"I'm glad Purdy didn't hear that!" said Frank. "Nothing seems to affect him so much as speaking of home. Danger of any kind would not make him quail, but when——"

"Listen!" A call was heard from Mr. Purdy who had strayed nearer to the cliffs some distance away. Hastening to the place he called their attention to three minute, black objects on the horizon, evidently very far away.

"What are they?"

Joe, who carried the glass, handed it to Harry who looked intently, and then turning, said:

"They look like the tops of vessels far down in the distance, sailing south."

Frank nor Mr. Purdy could add anything to this, but Joe took the glass and looking a while said:

"If they are vessels, they have a top that is not like ours," handing the glass to Harry who looked again.

"Proas!" said he. "I can see now; one has turned a little, but they are so far out that they hardly see the island, even Mount Hope. In fact, I don't care much if they don't."

"Why?" asked Mr. Purdy in surprise.

"I believe they are pirates!"

There was a dead silence when this was said, as the party gazed at the three little black points in the north.

"Yes!" said Harry, "I am afraid it is a fact. Piracy was broken up and driven from the eastern seas several years ago but they did not suppress all. The great majority, of course, had their vessels destroyed, but they managed to get into their nefarious trade again here and there. Now this is on the west coast of Malacca and Java, away from their old stamping grounds, which proves to me that

these fellows are much better sailors than the usual run. Here they may meet rougher sailing, but they are safe for a while at least from the strong hand of the navies. They have hiding places into which they can slip and be safe. Even at this date there is piracy on a small scale on the northwest coast of Africa almost under the eye of Europe itself. If I am right in my conjecture, these ships are really more 'proas' than junks, and if they are pirates, the boats are manned by a crowd whom we would not wish to meet."

"They seem to be disappearing," said Mr. Purdy, which was the case, as they were now scarcely visible to the unaided eye.

"I wonder whether they know of this island?" asked Joe.

"They may, and do not think it worth their while to come here," said Harry, "but if they once knew what a prize they could find, I think we should have them in our bay in a day's time. Should such be the case, we would have to cut loose from shore and fight in open water or devise some other method of defense. However, for the present we shall not be troubled but we must be on our guard. We will see what is best to be done to-night when we reach the *Katharine*."

In a half hour the vessels had gone out of sight completely, leaving the castaways to resume their journey. They found the ground easy to get over, along the northern fringe of the forest, and at times saw what they supposed were once lookouts on the rocks, probably used by the people who built the temple, or once inhabited the island. Following the coast line they arrived at the northern inlet about two o'clock in the afternoon; from which point they could see the tops of the *Katharine* towering above the trees of the creek about four miles away. The hull and most of the masts were concealed from view. From here they followed the beach on the hard sand, for the tide was down, arriving at the creek about four o'clock, where they found Andy busy at the new boat. He had seen the column of smoke as well as the light, but had not seen the three vessels; his position when at work precluded that. Supper being over, a "council of war" was held in the cabin to take action in regard to the strangers, the result of which was that the tops were sent down, thus effectually concealing the ship from observation should anything enter the channels at the ends. Then the ship was thoroughly fitted out with repeating rifles and in addition to this there were electric connections made, so that a person not ac-

quainted would receive violent shocks at several points, such as the gangway from the shore, the main cabin and other places on deck. All this circuit was put into action by switches controlled from the cabin or deck, if desired. The work on the boat was hastened now, there being every prospect that it would be completed in a short time. Mr. Purdy had Frank make for him some flat pieces of thin steel from a larger piece. These he took to the dynamo and thoroughly magnetized by passing them across the bottom of one of the heavy field pieces while the dynamo was running. This made them permanent magnetic needles, they being about an eighth of an inch in width and a few inches long. One of these he placed in a neat wooden box constructed under Harry's directions. In this was a center pivot; upon it was swung the new needle, which immediately pointed north and south, a card was made from a piece of silk and fitted to a light metallic hoop; this was lettered by Frank as Joe slowly "boxed" the compass for him. These compasses worked finely and were put into use at once.

The boat now took on more shape, Andy saying that he could finish it in a short time. The mast and bowsprit which they decided to use were taken from

the spare spars of the *Katharine*, of which there was a good supply. While the work was in progress Mr. Purdy and Joe constructed an electric stove which could also be used as a heater if necessary. This was placed in the temporary galley and eventually proved to be one of the most useful things on the ship.

"How is the heat generated?" asked Joe.

"You may remember I told you German silver was a poor conductor of electricity," said Mr. Purdy. "Now we will take this German silver wire and coil it around the cylinder of baked clay we made some time ago for this purpose, winding the coils in a spiral and then connecting them in a circuit with our current, we at once get the heat by the struggle of the electricity through the German silver wire. When we have finished with it we simply turn off the switch and our fire is extinguished, as it were, with no ash, dust, smoke nor gas. The heat is simply electrical energy going off in another form. We could, if desired, make kitchen boilers and other apparatus with the resistance coils attached to some convenient part and thus cook at once without even a stove. Of course, while this costs us nothing, it would be rather expensive for general use, where, as a rule, the current must

be generated by the use of engines, boilers and dynamos."

While Andy was working on the boat, he preferred as a general thing to be alone and only asked for assistance occasionally when a heavy part had to be handled, so a few days after the party returned from their trip, he asked that one would assist him for an afternoon. This Mr. Purdy volunteered to do. While they were at work the rest took the *Edna* and made a trip across the bay for eggs and turtles. When they reached the first island, about two miles out, Joe sent a message to Mr. Purdy by the signal system which the latter received and answered by flag. They never neglected an opportunity to use the code, but Joe excelled in the art, as he had committed the entire list to memory. While the party were skirting the islands, Harry called their attention to the sight beneath them. At that particular point, the water was about twenty feet deep and clear as crystal, showing on the white sandy bottom, brilliantly colored aquatic plants, interspersed with marine shells of exquisite tints; among these beautiful fishes darted to and fro like birds, making an enchanting picture.

"They call these 'Sea Gardens' in the West Indies," said Harry. "I remember once we put in at

Nassau on one of the Bahamas, where they have boats with a thick glass panel in the woodwork, through which tourists may get a fine view of the bottom of the sea. They also use a water glass which is simply a wooden box about six inches in diameter and about eighteen inches long, with a piece of window glass fitted into one end, the other being open. The glass covered end is put under the surface while the observer looks into the open end and sees clearly without the troublesome reflection of the water. We will make a few of these for our visits here."

They passed an hour floating, as it were, in crystal, over the lovely spot. Then, remembering their errand, they landed and had no difficulty in finding all the eggs they wanted as well as capturing a fine turtle, after which the yacht headed homeward, for the ship was now home to them; arriving there late in the afternoon. That evening the electric stove boiled and baked to perfection the supper for our voyagers. The new boat was under a fair way to completion. The stern and heavier timbers having been set up before the party made their last western trip; these were covered with the plank made some time before, so that the hull was almost ready for caulking. This was thirty feet in length by eight

feet in width, with a depth of four feet. In a few days the caulking mauls of the *Katherine* were driving oakum into the seams and then followed the pitching of the seams, which was accomplished through much tribulation on the part of Andy; with this the hull was ready for launching.

"What shall we name her?" said Joe, as the boat was almost ready to slide down the ways, which in this case were simply three well-greased spars.

"How will '*Rescue*' suit?" suggested Mr. Purdy, with a smile.

"Just the name," said Joe excitedly. "That's what we will name her—with your permission, Captain Henderson," he added, turning to Harry, with gravity.

But no one dissented, or rather all unanimously voted with Joe, so, taking a glass of sea water, he poured it on the bow, saying:

"We name thee *Rescue*! may we soon see thee fulfill thy mission!"

With this Mr. Purdy moved the last support, letting the little craft swing into the bay. There was no screaming of whistles or playing of bands, or booming of guns when that trim little boat saluted the waters of the great Indian Ocean, but there was one common prayer in the hearts of that small

party that it would be the means of leading them to their loved ones at home who mourned them for dead.

The *Rescue* sat in the water gracefully, but at the same time was not a boat of elegant lines yet she had a sharp bow and well molded hull so that she might be fast as well as seaworthy, the latter being the main object. When the single mast was stepped into position and the trim little bowsprit laid into place, she began to look the seaboat. It took a few days to get the rigging completed, after which the whole party boarded it for a sail. They first laid a course for their main entrance, which they now mapped as "Providence Channel." The *Rescue* behaved beautifully, obeying her rudder like any other well regulated boat. Soon the reef girt channel was passed, when the boat breasted the swell with ease. Rounding Promontory Point, they glided into the mouth of Oil Creek in as good time as the *Edna* was capable of doing it. They did not attempt to ascend the creek on account of the difficulty of sailing within such narrow limits.

Again making a sweep to the west, they observed that their beacon in the far north, as well as that on Mount Hope, was all right. Retracing their route, they again doubled Promontory Point, bringing

Providence Channel into view. By this time the wind had freshened, causing a heavier sea, but the little boat met it bravely, showing very good qualities, and so after a run of some miles to the seaward, they returned to the quiet waters of the bay well satisfied with their trial trip.

A small cabin was yet needed to be built and comforts provided for the crew and the ballast being only temporary, one of a permanent character must be found and placed in order to fully complete the little craft. When they returned to the ship they were delighted with the prospect of an early voyage; for in a few days the boat could be completed and ready for use. There was a cabin with berths for six; even a corner was reserved for the cook. The stowage space was utilized in every possible way. The hull had been painted before launching, so that nothing remained to be done in that line, but painting the name, which Frank volunteered to do.

The middle of October had been reached before the *Rescue* was in readiness for a voyage of any length, but as yet no route had been determined upon. They, of course, knew that the island lay anywhere from eight hundred to a thousand miles west of the nearest land, which might be Sumatra or Java, and it would be no light task to undertake

the journey. They could almost depend upon the weather being fair during the dry season; but storms might arise, and as yet, the new boat was really untried for a gale. It also remained to be decided as to the number and personality of the crew. There ought to be two, if not more, and one of these should be an experienced sailor, so that it was evident Harry or Andy should be one of the crew, but the former thought it best to stay by his vessel as long as there was any hope of rescuing her, thus it would devolve upon the faithful German to navigate the vessel. Before the trip was made, however, they intended to visit the mysterious land of the smoke, to the north. There might be people on the island and even means of communication with the outside world. Harry thought the land might be thirty or forty miles away, while it might even far exceed that. With a fair wind, the *Rescue* should make this in eight hours or less. Allowing one day for explorations, it was fair to presume that the boat could return on the third day or thereabouts, according to wind and tide. The possibility of meeting piratical craft was not taken into consideration. If those seen from the island were junks, they would not be able to cope with the *Rescue* in speed; but if they were Malay proas (which was just possible), then

the case might be different. It being Friday evening when all was in readiness, the trip was planned for the following Monday, the next day being devoted to mounting and putting into operation a search-light, of which there were six in the cargo, all intended for the Spanish Government at Manila. This light would have been in position before but for the work on the *Rescue*. Joe was particularly anxious for this, as he wanted to try the code made for him by Miss Helen Littell.

"But who will get our signals?" asked Mr. Purdy, smiling at his eagerness.

"Why, any ship that is in sight of the ray!" said Joe. "You see there is no doubt that some ship will pass that has a copy, don't you think?"

"How would they get hold of that particular code?" asked Mr. Purdy.

"Why, couldn't the Littell people have given it to the *Marine News* and have them on the lookout?" said he, earnestly.

"No, I am afraid not!"

"Why?"

"Because they think we are dead."

Poor Joe! He had not thought of that.

CHAPTER XXIII

THE SEARCH-LIGHT

THE searchlight was brought out of its case, in which it had been carefully packed for the voyage. On account of the bow of the *Katharine* being well into the creek at this time, and somewhat hidden by the adjacent banks, it was thought best to mount it on the cabin deck for the present, where it would have more sweep; in fact, it could command the bay entirely. The dynamo was now run in daytime only, the storage batteries furnishing sufficient current for all practical purposes after being charged, and this current could be used for two nights in succession; the consumption not being heavy on the ship.

Monday dawned bright and clear. The *Rescue* was quite ready for the trip. Harry, Mr. Purdy and Andy constituted the crew, while Frank and Joe were to remain "to keep the island down," as the latter said, although it was hard for him to conceal his true feelings when he saw the final preparations

made. After breakfast, the two boats moved out into the bay. With the exception of Andy and Toby, who were on the *Edna*, the entire party took the *Rescue*. The breeze being favorable, they reached the northern entrance in about half an hour. Here a change was made, after bidding each other farewell; Frank and Joe, with the dog, taking the *Edna*, which accompanied the sailboat out to sea for a mile, and then, with a parting cheer, the boats rapidly separated. Joe and Frank watched their friends from the islands at the northern entrance until they disappeared on the blue watery waste about an hour later. For the first time since the castaways were thrown on the island, Joe felt lonely. True, there had been excursions to the interior in which he had not participated, but all these were "on land," or in the neighborhood, and, it seemed, in a hospitable country, but now it was as if across the sea.

That night he saw that the arc lights were run to the highest power, so that the mariners could see them if in range.

The party on the *Rescue* left the launch after bidding all farewell, and now sailed directly to the north, on the course indicated by the column of smoke, Harry having carefully determined this from

observations made prior to starting. Their compass, although home made, worked like a charm. As a matter of fact, they had also two of smaller size for pocket use with them, there having been enough made for the boats and other use.

Gradually the cliffs on the north shore of Hudson Island sank in the southern horizon, so that by two o'clock the summit of Mount Hope dimly showed over the blue sea in their rear. There was a light southern breeze that gave them a speed of about six knots an hour, while the day was perfect. About three o'clock in the afternoon they sighted a coast ahead, still twenty miles away, lying apparently low, for they could only distinguish the broad tree tops as if standing in water. As they approached, the coast it showed a low, flat shore, covered with tropical trees to the water's edge.

"An atoll!" said Harry. "See the shore line curving away on both sides of us, and yonder is the opening to the lagoon inside. It's lucky we found it right here, for this one is probably fifteen miles around."

"Is it a coral formation?" asked Mr. Purdy.

"Yes! this one is, and I suppose all of them are. You see this passage is probably two hundred yards long, that is the belt of land is about that wide and

the water is apparently five miles across. When we reach the inside we shall find it as calm as a mill pond."

The atoll, which was now close at hand, was simply a circular belt of land about fifteen miles around, enclosing a beautiful sheet of water, free from the disturbing swell of the sea. As they sailed into the entrance, through which a large ship could easily pass, they could see that the land was covered with cocoanut and palm trees down to the water's edge. Inside there was a solemn silence, tempered, as it were, by the low roll of the surf on the outside beach. The contrast was so decided that for a moment not a word was uttered.

"Well!" said Mr. Purdy, "I am disappointed. This is a natural novelty, or rather, a freak of nature, but we are now looking for humanity of some kind, as a first step toward getting to civilization."

Harry, however, was busy with the glass, and, handing it to Mr. Purdy, he said:

"What do you make out of that object?" pointing to a dark thing about half a mile from the entrance. "It looks like a hull or a wreck, but how did it get in here?"

The breeze had died down somewhat and made their progress slow; so that it was some little time

before they had reached the point on the shore where the object lay, almost covered by the waters of the lagoon.

“That explains the mystery of the smoke,” said Mr. Purdy, as they approached. “It’s a ship, or what was once a ship, and it has been destroyed by fire; no doubt it broke out, so they came in here for safety, and afterward the crew escaped in their boats.”

But Harry looked a little puzzled.

“That theory might answer, but there’s another just above it,” said he, as they rounded the sunken fire-scarred hull.

“Dot one was burnt too!” said Andy.

“This only confirms my suspicions regarding the three strange sails we saw from our island,” said Harry.

“Do you mean that these ships were destroyed by pirates?” said Mr. Purdy.

“Yes! that’s just what I think. They harbor here and pounce upon some unsuspecting merchant-man, which they tow in and destroy after they have murdered the crew and rifled it. A ship on fire at sea might be put out by some chance, or even attract assistance, and there being found the evidences of a struggle, it would point to piracy, so they tow

them into these lonely lagoons, where no one ever enters, and burn them. There may be more here if we only knew it. It makes me shudder to think of the fate of the poor fellows who manned these vessels. They are not large, and fell easy victims to these miscreants, because they thought there were no more pirates in these seas, never suspecting any foes in the innocent looking native craft. If it wasn't so late in the day, I would say let's get out of this, but as this is safe anchorage, we had probably better remain until morning, then decide whether to go on or return. The island we supposed to be hereabouts, turns out to be a pirate's rendezvous."

"Do you think they are Malays?" said Mr. Purdy.

"Yes! I rather think so," said Harry. "They are better sailors than the Chinese, and would venture out more to the high seas. Now, of course, this is only my opinion of the place. What do you think of it?"

"I think you are right! The place has an uncanny look to me, anyhow; coupled with this sight, it almost gives me the 'shivers,'" said Mr. Purdy. "Under other circumstances it might be something of a satisfaction, if not a pleasure, to explore this singular place, but now it seems as dismal as the

Catacombs. I shall be glad when we are out on honest blue water again."

By this time the *Rescue* had found its way close inshore, guided by Andy, who was at the tiller. The sun had almost gone down in the west. In a short space of time the island would be wrapped in darkness. Mr. Purdy had prepared the evening meal as they approached the atoll, so that they were ready to turn in for the night if they felt so disposed. The boat was swung around again toward the entrance, when Andy, in a low voice, called Harry's attention to the channel. To their astonishment they beheld in the dim twilight two large proas coming through, moved by sweeps, the wind having died down. The newcomers apparently did not see the *Rescue*, as the daylight had now almost disappeared and, lying close inshore, it would be hard to distinguish her against the background of trees.

"For the present I do not think they will see us, so we are safe, but we must get near to the entrance and cut and run if necessary. We will trust to Providence, and these rifles," said Harry, as he picked up his Winchester, 43 calibre. "We have each one hundred cartridges for defense, if necessary, but we don't want to fight unless we are forced to it."

By this time the night had fallen with that quick-

ness peculiar to the tropics. They could distinctly see the two craft on account of the lights, that seemed to be rather numerous, and hear much disorder among the crews. Slowly creeping along the shore, our voyagers came to within a few hundred yards of the strangers, and then stopped and listened. Harry, who could understand some of their language, heard them give the order for anchoring, when they were not far away from the entrance. This made it awkward, as the *Rescue* would have to pass close by the second vessel in order to make the channel, and now that the tide was rising, and the current was setting inward strongly, they must exercise patience and wait; but it would be on the ebb in a few hours, so until then they would be practically helpless.

There was no difficulty in letting their boat drift back again, completely out of hearing distance, and at the same time be safe from anyone who might take a notion to prowl along the shore. When they came to a standstill, they could yet see the lights moving to and fro, as if there was considerable work being done on the strangers.

"It's difficult to say what it means," said Harry. "They may be repairing damages, but they are not storm damages, for we have not had any storms for

a long time. They are evidently getting ready for something, and I think it's going to take them longer than we can wait—if we are determined to go, which may not be the wise thing under the circumstances.”

“How will it do to cross over to the other side and cover our boat with branches, so as to conceal her until the track is clear?” said Mr. Purdy.

“That's just the thing,” responded Harry. “We have a drift that way, anyhow, so we will keep her to it until we get through.”

So the little vessel drifted, aided some by oars, until the other side of the great circle was reached. They could but dimly see a light now and then on the other side, but felt so secure that all three were soon wrapped in slumber. Andy was up and ashore before daylight the next morning. In a short time he had a supply of green branches ready for trimming, which was soon done. The strangers still held the channel, never dreaming of anyone else being near them. While the little crew was taking its breakfast, Andy called out for them to look to the north. There, far away, they saw a column of smoke rising skyward. It was fully twenty miles distant. For a while they watched it, when Mr. Purdy said:

"That's not half as far from us now as we are from our island, don't you think?"

"Yes," said Harry, "but look over there," pointing to the opposite side. To their astonishment a similar column was now ascending into the air. Black, heavy looking smoke; evidently the fire was fed with some smoke-producing substance.

"I am of the opinion," continued he, "that if we are correct as to the character of our neighbors, that the first smoke was signaling to these pirates that a vessel of some kind was on its way past here, and now these fellows are answering it, but we shall know it before long, as they will now watch for the unsuspecting stranger and make an attack, if they think they can overpower him. From what little we saw and heard last night, there are at least a hundred on the two pirate vessels, while their victim may have not over twenty-five men, and unarmed at that. What wouldn't we give for only one of the *America's* light rapid-fire guns! If the coming ship is only an ordinary sailer it ought to pass here by ten o'clock, and these scoundrels will get in their work—and horrid work it will be!—Oh! if only we could head them off!"

The land surrounding the lagoon was only a few hundred yards wide at the most. Hastily springing

ashore, Harry and Andy made their way to the outer beach, from which they could command a wide range of the ocean, Mr. Purdy, in the meanwhile, keeping watch on the inside. About two hours later, they caught sight of a vessel hull down in the horizon, sailing due east. The pirates' prey had escaped! With feelings of joy they came back to the *Rescue* and told Mr. Purdy, who had seen no change in the position of the enemy; who were no doubt disappointed in their calculations; but would they remain?

"To-night," said Harry, "we will leave here, even at a risk. We must get back to the island and make ready for the visit that they certainly will pay us sooner or later. Now we are certain that there are others in these seas besides this gang. The tide will be on the ebb about ten to-night, and then we will try it."

Their rifle magazines were filled, ready for an action they wished to avoid, and precaution taken against noise of any kind. As far as practicable the branches were left in place, so as to show as much green as possible. There was not much breeze, so when the *Rescue* approached the opposite side, it was nearly midnight. A few lights showed the positions of the vessels, but the little crew well knew

that their enemy was a wary one. Silent as a phantom was their approach; the faint breeze that had assisted them now died away, leaving the boat to drift or be urged with a pair of oars, with which they were provided. One of the pirates had swung around, with the tide, so that there was but a narrow chance to get around her stern, as they did not want to run the risk of fouling on her anchor cable, which was stretched out from her bow. Silently they moved; in a few more minutes they would be in the current of the ebbing tide, setting seaward. Mr. Purdy stood on deck with rifle ready, while two more lay on the deck beside the rowers, who were slowly moving their craft with long measured strokes. Already they felt the influence of the current, just abreast of them. They could almost look upon the deck of the pirate, as they nearly brushed her stern, upon the cabin of which sat a man, apparently looking forward, totally oblivious to his surroundings. He was evidently dozing. Suddenly, as the last stroke of the oars sent the *Rescue* clear of her stern, into the current, Andy's oar made a jump in the rowlock. The sleeper jumped to his feet and peered over one side, fortunately the wrong one for him, then over the other, by which time the *Rescue* was rapidly increasing the distance between

them. Then there was a hail, and answers from the other boat, which only confused them more. During this time Harry had taken the bow, with a light showing ahead, and directed the *Rescue* safely out into the open sea. When they were at last out of reach of the enemy, the light breeze that had been cut off by the land, again caught them; setting their course southward, they were now homeward bound.

“If those fellows saw us at all,” said Mr. Purdy, “they either were confused by our holiday attire, or maybe thought we were some evil spirits. At any rate, we are safe now; but how they would set sail for the island, if they only knew how matters stood there.”

“I am afraid now that it’s only a matter of time until they do find us,” said Harry, “but we won’t worry over it just yet. Let us be thankful for our easy escape this time, for those fellows know no mercy. We were somewhat disappointed in our trip, yet we now know how the land lies hereabouts.”

Sending Andy and Mr. Purdy below for much-needed rest, he took the little vessel in charge over that lonely sea until relieved by Andy at daybreak. Holding on their course, they left the atoll, with its unpleasant recollections, behind them, and shortly afterward had the pleasure of seeing Mount Hope

gradually rise above the rim of the sea. When they were within a few miles of the Northern Inlet, with the aid of their glass they saw Frank and Joe waiting for them, and read Joe's signal, "Welcome!" "All well!" and other messages, to which reply was made as soon as the distance decreased, for Joe had no glass. The happy boy could scarcely wait until the *Rescue* was alongside, when he jumped aboard, with the inseparable Toby at his heels, and hugged the whole crew with delight. He had so many questions to ask, about the new boat and its trip, they could scarcely answer them intelligently.

"Now, Joe!" said Mr. Purdy, "I am afraid you will be disappointed when we tell you that the mysterious smoke was made by people to whom we did not even speak."

"Were they pirates?" said Joe, guessing at the truth.

"Yes! we think so, and in fact, are almost certain they are; we gave them an unceremonious slip last night," and then he related the whole trip to them.

"How many do you think there were?" asked Frank.

"There might be about fifty to each vessel," replied Harry.

"The odds are great, supposing they attack us,

but we shall come out all right, I think. We will fortify at once, and adopt means for safety, and then exercise vigilance. It is just likely that we may never have a visit from them. They certainly know something of our island, for they probably have seen it from a distance, as we first saw them from the north shore, but they do not dream of finding a vessel here, where, in fact, they think one cannot come. So, on the whole, we may not have any trouble, for the present, at least. Whatever our next cruise will be, we must determine later."

By this time they had arrived at the creek and soon were again on board the ship. That night they discussed their strange and unexpected adventure at the atoll, which probably would cause a change in their plans. It was almost confidently expected that they would meet inhabitants who, in some way or other, had communication with trading vessels visiting their islands, and through this means, at last be released from their peculiar position.

But now, instead of immediately sailing on another tack, they lost no time in making ready to place the ship in better position to fight a merciless foe, should the necessity arise. Firearms and ammunition they had in abundance, and all on board were trained in their use, but the marvelous precision

and rapidity of Frank's firing was always applauded. These practices were held daily, so that an attack, if not made in the dead of night, would meet with a warm reception. There was no doubt that, with some care, the pirates could get their light vessels through the inlets at either end of the bay. It was decided that, for the present, only the search-light should be used at night; all the arc lights being discontinued, much to the disappointment of the monkeys, who, for some reason or other, delighted in playing in their bright beams. Their stock of naphtha was increased. The sea was thoroughly scanned and for this purpose patrol trips were made frequently to the Western Bay.

Inasmuch as the search-light was in position and plenty of current on hand, Mr. Purdy taught Joe to connect it into the circuit and work it. Joe's code, that Miss Littell had made, was brought out and gone over. The light being of twenty thousand candle power projected a beam that was startling in its effect. When thrown on the Northern Inlet, about four miles distant, a small vessel might have been seen if it had found its way through. In like manner it swept the bay far to the south.

But the most interesting thing to Joe, and perhaps to the others also, was the signaling in Morse

telegraph letters. For instance, the word "Help" is represented by - - - - - — - - - - -. The beam of light was always first raised to the sky to about the angle of forty-five degrees. Thus, for the word above given, the beam was first raised, then dropped four times - - - - for "H"; instantly it was raised and held for a second and dropped once, - for "E"; in like manner it was raised again, then dropped and held there for about three seconds for "L," and then five more motions - - - - - for "P." Anyone who could follow the Morse code or who could telegraph, would at once read this as "HELP;" as it was necessarily slow, it was easy to follow. They were all delighted with the possibility of this method, for sea signaling. By it anything could be expressed, whereas, a code of numbers was necessarily limited.

That night Mr. Purdy made the word, and then Joe repeated it twice with ease, before shutting off the lamp for the night. But that phantom beam, as it broadened up from its narrow focus into the sky, was not lost; other eyes saw it, and wondered where it came from and what its meaning might be. The good ship *Laurence*, bound from Norfolk, U. S. A., with a cargo of coal for Hong Kong, was sailing with a fair breeze, headed for Sunda Strait, and

was now running south on a course that carried her parallel with Hudson Island, less than twenty miles east. Her captain, Henry Hobbs, was just looking over his chart, which indicated several atolls in this vicinity, when his first mate called his attention to a beam of light that was being thrown into the sky.

"A search-light!" said Captain Hobbs; "probably there's a man-of-war over there, hull down."

Then the ray sank low on the horizon and moved here and there, when it again raised to a point about midway to the zenith, then it rapidly sank to the water's edge; four times it did this, then once, then it raised and dropped, staying down some seconds, and this, after an interval of a second, was followed by five more motions.

"That's some kind of a signal," said Hobbs. "Did you notice how regular it was? There it goes again,—four—one—one long—five—same as before. Strange how a fellow can read a thing when he knows what's coming," and leaning on the rail they saw it for the third time - - - - - — - - - - -, after which it disappeared.

"I am going to make a note of that," said Hobbs. "Who knows what it may mean? Anyhow, I will report it at Hong Kong, be what it may."

Captain Hobbs made the following entry on his log:

“Oct. 25, 1894. About nine o'clock this evening saw a ray of light on sky to the west. Looked like search-light. The beam made same signal three times in succession, by throwing beam up and down; four—one—one long—five—and then disappeared.

“Latitude: 7 degrees, 16 minutes South.

“Longitude: 92 degrees, 16 minutes East.”

CHAPTER XXIV

PREPARING FOR PIRATES

It was a great disappointment to the castaways to have their first voyage result so unfavorably, but they believed there was a Providence in it after all. Up to this time they never entertained a thought of troublesome visitors and much less of pirates. Now the stern reality was forced upon them, and they could guard against it. In order that every possible chance for meeting a vessel at sea might be made available, the *Rescue* took trips seaward, lasting sometimes a whole day, in the hope of crossing the track of something bound to or from some eastern port. Generally there were two in the crew on such occasions, of which Harry or Andy was one. Joe was a frequent passenger, and, for that matter, could now sail the boat capitally.

Mr. Purdy made for these trips heliograph instruments from some pieces of mirror, one of which Joe always took with him, sending back signals at

stated times. He had become so expert with the Morse telegraph code that he could transmit and receive messages readily with the bright reflection from the mirrors. These signals were not only for amusement; they were also intended for attracting attention in case a distant vessel was sighted, but the sea was apparently deserted, for they never even caught sight of one. Neither did they see any more smoke signals in the north, so that apprehensions from that quarter became less; yet it was not thought prudent to weaken their forces for some time to come.

These sea trips or patrols never showing the least sign of vessels in this lonely sea, it was determined to fit out the *Rescue* for a long voyage to the nearest mainland, which was supposed to be the Island of Java. For this purpose, provisions of the most compact kind were gotten ready, as it might take ten or twelve days to reach land. Every inch of space was utilized, so that by the end of December the preparations were nearly completed. Andy and Mr. Purdy were ready to make the trip, there being but little risk at this time of the year, and the seaworthiness of the *Rescue* was now established. While the little boat was receiving some slight alterations, preparatory to being fitted out for the voyage, a trip was

arranged to explore across the Western Bay and thence north through the country lying along the diagonal ridge or water shed that stretched from Mount Hope to the Northern Beacon.

Andy said he wanted at least two days to give the hull of the *Rescue* a couple more coats of paint, and then had some other parts to strengthen prior to loading, so that it might be three days before a start was made. The next morning the explorers, with Andy as engineer, started early with the *Edna* for the southern end of the bay, landing at the base of Mount Hope, where Andy left them, returning to his work. The day was bright and pleasant, a cool breeze was coming in from the ocean, tempering the heat of the sun. As usual, each member of the party was armed, and in addition, carried a few necessary articles for the preparation of meals. Their ascent of the eastern base of the elevation was necessarily slow, but when the high plateau was reached, Mr. Purdy proposed that now being so near the beacon on the summit, it would be well to visit it, as it was only a half mile more to the south. As they approached the summit, he called the attention of the party to the mount-like eminence upon which the beacon stood. This was still intact, but the tropical growth of one season had already begun to

shoot up so rapidly that it was thought best to clear it away, which was accomplished in a brief time, showing the blue ocean stretching dreamily away from three sides of the island.

“One would scarcely think that it is the same cruel sea that threatened us with destruction for days!” said Frank. “I am inclined to think that the tropics are exerting some sort of influence over me, for I feel as though I could look at that beautiful picture for time indefinite and be happy, were it not for our situation.”

In truth, the view was enchanting. Far out to where the sky and water joined, the blue waters shimmered and glistened, sending the reflections of the bright morning sun back to the eye from myriads of points. Down at the bay, of which they could see a goodly part, the swell was breaking itself gently against the rocks and small islets that formed the barrier between the ocean and the bay. To the west they could see it breaking on the shores of Western Bay, only interrupted where the waters of Oil Creek brought its iridescent sheen from the interior and spread it over the waters near its mouth.

“I wish we had a pagoda here. Wouldn’t it be nice to spend some of the warm weather in such a place?” said Joe.

"I don't know but that there was one here in time gone by," said Harry. "Look at this mound; it's almost too regular in shape to be natural."

"See here!" exclaimed Mr. Purdy, acting on the suggestion, and digging into the soil with a stake he had cut. "Here is masonry joined in the same manner that we saw in the ruined temple. This was evidently a lookout or, perhaps, a summer pagoda, as Harry says; but who were these mysterious people that built all this massive work and left no record except such as we now see?"

They left the beacon and proceeded to descend the western slope, intending to cross Oil Creek near its head, where they could ford it at low tide. Toby being in the advance, as usual, raised flock after flock of game birds, which were not disturbed further, as there was no need of provisions. When they had followed the slope to the north for some distance, they turned to the west, catching Oil Creek near its upper source, where it was easily crossed, then proceeding southward they came to the petroleum spring about noon, tired and hungry. Here Mr. Purdy, assisted by Joe, soon got up an excellent dinner from their stores and the fruits growing in plenty on all sides. After dinner they devoted a little time to putting the oil still in good order, then resumed their

march to the north, intending to pass somewhat to the west of the temple.

"I think we ought to be thankful that we have not thus far seen a poisonous reptile of any kind," said Harry. "There are not many places favored like this."

"Maybe our former inhabitants settled that matter," responded Frank. "They may have exterminated them. If they did, we certainly owe them a vote of thanks, even at this late day."

"Nevertheless," said Harry, "we must be careful; there might be some; but I am inclined to think the island is entirely free from them."

Evening brought them out to the west coast, where they camped for the night. They had plenty of water from the pitcher plant, which grew in abundance. Neither did they neglect Toby, who was provided with food and water regularly. After examining the coast thoroughly and finding nothing to claim attention, they retired for the night, Toby alone acting as guard; but nothing disturbed that peaceful Eden, all sleeping soundly on their improvised couches of palm leaves, until the morning sun called them forth.

After prayer, for they never retired or arose from rest without first committing themselves to God's

care, or asking His protection, they made their preparations for the day, intending to return via the Temple and Fairy Lake, their course lying on their former trail, which brought the party to the ruins about noon, where they halted for dinner and a rest. The marvelous architecture, as well as its immensity, afforded them food for conversation until they arrived at Fairy Lake, which to-day surpassed itself in beauty.

"I have no doubt," said Mr. Purdy, "that this place was a sort of public park once; a more restful place I never saw. It is peace, perfect peace."

"Unless we except the view from Mount Hope," said Frank, "but for that matter, the island is rest and peace in itself. I have a proposition to make," continued he. "Now that we are here together, Andy excepted, and may be separated soon; I propose that we will not give up this favored spot after we once are rescued, but that we settle it and visit it in company, if possible, at stated intervals, all details to be fixed hereafter."

The notion carried unanimously and Frank was then and there chosen President of the Hudson Island Improvement Co., which was to be incorporated under the laws of the State of New York just as soon as it was practicable to have it done.

“Now!” said Harry, “since we have taken some tangible steps in the matter, I predict that this will be a great coffee producing island.”

“Coffee?” said Joe, “where is there any?”

“Just across the way. Do you see that array of growth over there with those peculiar berries? That’s coffee. I think the whole western side of the island is best adapted to it, although it will grow anywhere here. I noticed this before, but since none of us use the article, it never attracted my attention amid so many other things. So you see we have, with our other blessings, coffee and petroleum enough to enrich us if developed.”

“And pearls!” added Joe. “There are lots of them in the creek; I really think we haven’t begun with them. Just day before yesterday I was trying to see whether the ship had fouled much, by using our water glass; when I saw something on the sandy bottom, down about twenty feet, on closer examination I found pearl oysters lying there in large quantities. So we might add that to our list.”

“And do not forget our magnificent water power,” said Mr. Purdy, pointing to the islet dotted lake in front of them. “This alone is worth more than pearls when we think what it can and will yet do for us.”

So the cheery meeting adjourned and the party turned toward the foot of the lake to make their way homeward. Frank shot a few fine ducks which Toby proudly brought out from the lake, into which they had fallen, while Joe, after some trouble, captured a young monkey which he secured with a small strap around its waist. At first Toby was inclined to resent its presence, but that wore off soon, so that the little creature soon allowed itself to be carried in Joe's arms without a struggle.

They had not more than gotten down to the creek, when they heard a halloo from Andy who was coming with the *Edna*, having heard Frank's gun shots out at the mouth. Our tired travelers rejoiced at the sight, and were soon gliding down with the ebb tide. Nor was Andy forgotten, for they complimented him upon his prompt and thoughtful service.

When they reached the cabin, Joe placed Master Binks, as he called him, in confinement until he would become domesticated. That evening the *Rescue* was almost ready for her trip, having received the last coat of paint just a few hours before. Harry made a chart from memory, giving Andy sailing directions and other instructions for the trip which might consume from one to two weeks, ac-

cording to weather encountered. It was not desirable to load too deeply, yet a sufficient supply of food and water must be taken so that when the little craft was ready with its passengers, it probably was down to the full load line.

On January 5, almost one year from the day the *Katharine* was so miraculously cast into the embrace of the island, the *Rescue* started on its errand for help. It was not so simple a matter as might appear at first sight, for there was an unknown sea to be crossed, the extent of which could only be guessed. Even when land was reached, it might take a long time and there might be serious delays in sending assistance to those left behind. The day was bright and fair when the two craft again held company until their arrival at the northern entrance, where the final farewells were spoken; at which Joe almost broke down, nor was he alone in this, for the little party had become united so firmly by the common dangers and exile of the past year that it was more like a family than otherwise. When the *Rescue* was fairly out to sea, Joe signaled to them by his heliograph, to which Mr. Purdy responded, and then the little boat disappeared even from the field of the glass, after which the party returned to the *Katharine*. Frank proposed a trip

with the *Edna* to the southern inlet to examine the beacons, to which all assented, even taking Toby with them, much to his delight. When they reached Providence Channel, they found everything in order; the buoys were in proper positions and all the guide beacons standing in place.

"Do you think a large vessel like ours would try to come inside to anchor by following the course between the floating buoys?" asked Joe.

"Well! no," said Harry. "If a large vessel came here, the captain could see at a glance that it would not pass and so would not attempt it. Just how we got in will never be known as it was night, and we might yet get out if we had a steam tug to tow us, but it would be madness to try to sail out or work her out. If we were to strike a rock, the chances are that the tide would soon have us to the bottom. If the *Rescue* gets into port; it will not be long until a steam vessel will be sent to our relief; for we have a small one belonging to the Red Cross Line that may be in Hong Kong now, or will be soon, as she makes short coast trips only."

"Do you think the *America* was caught in our storm?" asked Joe.

"That's more than I can say, as she was not to start until a week or ten days later than we did.

At any rate she could have easily gotten through it. We did, in spite of the fact that we were short handed. Yes! I think she weathered it all right."

After they got through, the yacht was headed for the ship, where the party sought rest from the heat, but finding that too great, they ascended the creek to Fairy Lake, with its shady and cool retreats. Here they remained until late in the afternoon, returning for supper, which Joe and Frank prepared.

Since the trip to the atoll, the dynamo was run only enough to supply the needs of a few incandescent lamps and such arc lamps as were deemed necessary. As all current was first charged in the storage battery, it sufficed with only a few days' work each week. Joe took charge of the plant, occasionally practicing with the search-light, becoming very proficient in its use. That night he stood behind the lantern, throwing the beams seaward in hopes that if the *Rescue* were within reach, they might see it.

"How far are they now?" he asked.

"They left about ten o'clock; it is now eight in the evening, so they are just ten hours out and with an indifferent breeze making, say, four miles an hour, would put them out say thirty-five miles," said Frank, "so I don't think they can see your ray now."

But as it afterward proved, the *Rescue* was becalmed about twenty-five miles from the island and saw Joe's light on the horizon, relieving part of the dreary night for the two mariners.

"What is that out to sea?" said Frank, the following afternoon; "it flashes like a heliograph. Can it be the *Rescue* is returning?"

The flashes were regular enough to attract their attention; Joe gazed at it intently, then suddenly called out:

"She's returning! Look! There it is again!"

Slowly and steadily came the reflected light from seaward, catching the rays of the sun, now toward the west.

"What are they saying?" said Frank. "I can't read it." ----- said the flashes from the little black speck, now just visible by aid of the glass.

"Pirates!" cried Joe; then sweeping the horizon with the glass Harry made out a few little points on the horizon in the east.

"If they are being chased, there is still a distance of ten miles between them, but those Malays can outsail our little boat, two to one."

The *Edna* was quickly brought alongside; Frank looked to the arms while Harry replenished the

supply of naphtha and in the meanwhile Joe placed aboard a couple of kegs of water and some provisions, under Harry's directions.

"We do not yet know how long we shall be out," said he. "Turn on current and set your search-light on the northern inlet; we may need it to get in to-night."

As near as Joe could do it, this was done, the beam, of course, being lost in the bright sunlight, which would last about three more hours. Then providing themselves with lights and signals, the *Edna* rapidly glided up the bay. The water was smooth, with a light easterly breeze stirring. When the inlet was reached, they put to sea without hesitation. Here again the bearings of the *Rescue* were noted as shown by occasional mirror flashes. Then the *Edna* stood boldly out to the relief of their friends.

"We have six Winchesters, 43 calibre, sixteen shots each, which would make ninety-six shots without reloading, besides several good navy revolvers, I guess that's enough for ordinary purposes," said Frank, "but I hope we shall not need a single cartridge," he added.

By this time they were fairly out in the open water with Harry at the wheel.

CHAPTER XXV

A BATTLE AND AN ESCAPE.

BUT little was said as they raced along. Occasionally Harry arose and tried to catch sight of the *Rescue*, but the lowness of the yacht in the water gave them little range; however, they knew it could not be long until she must be in sight. The two black points they had seen on the horizon were now unmistakably looming up, showing vessels in full chase; craft that Harry saw at once were manned by people who recognized no law but that of might. These were still ten miles away.

"There she is!" called Frank, pointing to south-east. The little sailboat was coming on under a full press of sail about five miles away.

"Wonder why we didn't see her before!"

"Probably something happened to his sail and he had it taken in," said Joe.

"They see us!" shouted Frank, waving the yacht's flag.

"We will meet in twenty minutes!" said Harry, "but unless we can elude those fellows chasing her,

in the darkness, we shall yet have trouble with them, and it will not be dark before another hour."

The boats met with a cheer.

"Don't slack off!" called Harry, as the *Edna* rounded about and ran parallel to her companion. "We are still ten miles from the inlet. It's a question in my mind whether we can make the run without a fight, and we are no match for those thieves. If we get inside and can face them from the Tongue at the entrance, we can beat them off."

The position of the boats was this: the pirates, of whose identity there was now no further doubt, were about three miles distant, coming on at a rapid rate, their huge lateen sails spread to the last inch. The *Rescue* and the *Edna*, still about eight miles from the inlet, the former with all sail set trying to escape, while the latter had limited her speed, keeping in close company. It wanted not more than half an hour to sunset and safety; in that brief time they would be overtaken, but in that brief time also was laid the plan for escape. After a while there was a peculiar hiss sounded through the air, and almost immediately a shot struck the water about a quarter of a mile to the right, raising a cloud of spray as it ricocheted onward; in a few seconds a dull report was heard.

“So they’re trying their guns; a most miserable shot, fortunately. Wait until we try ours!” said Frank.

In a few minutes another shot flew past them wide of its mark again. This time the report was not so far behind the flash of the gun. The imperturbable Purdy stood, watch in hand, as the next shot tore up the water, “*five seconds*,—distance about one mile!” The foremost of the pursuing boats was fully a half mile ahead of its consort and was racing like mad in pursuit of its little prey, now only a short mile ahead. The clumsy gunner tried a fourth shot from their light bow gun, but with no better result than before. It was plain these desperadoes were more expert at handling their smaller murderous weapons than engaging in a stern chase, and they also saw that the little sailboat they had been pursuing for the past few hours, was suddenly joined by another small boat that moved speedily, and yet without sails. It seemed to them almost to have risen from the sea, and was now running side by side with the object of their pursuit. Then they made the attempt to stop or destroy them with their antiquated bow gun. But they did not know the character of their fleeing opponents. As the first pirate closed in, not more than three hundred yards



They saw a slight puff of smoke arise. — Page 257.

away, with bows crowded, regardless of discipline—if they ever possessed any—eager to pounce upon the little strangers, they saw a slight puff of smoke arise from the newcomer without sails; in an instant two of the bloodthirsty villains reeled to the deck.

So quickly and mysteriously was it done that it was not noticed by many of the yelling crew. Almost instantly another puff, and a big Lascar staggered and fell to the deck with a shattered shoulder. Before they could drop to the bulwarks, three more shots struck their proa, one piercing the bulwarks, stunning a man, another striking the wheel, while the third sent to his last account one who still had the temerity to stand up boldly. There was consternation then. No single shot came now, for the reports were plainly heard—a perfect fusilade, and man after man was struck. By this time the first pursuer had closed in to within a hundred yards' distance, when they saw the little sprite without sails suddenly turned out at right angles, as did her partner, thereby opening a better range of the deck of the astonished pirate. First the man at the helm tumbled forward, and a raking cross fire came in from both little boats that seemed to have some deadly machine at work. With no helmsman with

courage enough to take the wheel, they flew wild and brought up in the breeze with shaking sails and could not bring her around, as deadly missiles were tearing the woodwork whenever a man showed himself.

In the midst of this the second pirate came up, having ineffectually tried his guns in the *mêlée*, but he did not know what had happened beyond seeing some commotion on his piratical partner ahead, followed by the sudden stoppage and coming into the wind. He found out in a moment. The eager horde, armed to the teeth, swarmed to the bows, and this time it was not a single death dealing missile that came singing its fatal song, but a volley, an unbroken stream of lead came pouring in from ahead and then, before the almost stunned gang had time to take to cover, the little tormenters crossed ahead, bringing them on the beam and raked them from helm to bow. They had caught some new terror of the sea.

But the darkness closed in and the awful fight came to a close. It had not lasted over fifteen minutes from beginning to end, when it was thought by our voyagers safe to quit. By the aid of the search-light, now gleaming from the ship, they made the inlet in safety. Here they landed on the

“Tongue” and waited for some hours, but saw no further signs of their discomfited enemy.

It was midnight before they were safe on board the *Katharine* where Joe was almost overwhelmed by Toby, who had been left back. The poor boy had exhibited courage in the highest degree acting as helmsman, while Harry and the others repelled the attack. When they gained the deck, Mr. Purdy grasped Frank's hand in both of his.

“My boy! you did it that time. It was your first long distance shots that terrified them and made it easy for us. With all their bad intentions, I pity them.”

After putting the vessel into position to make the best defense, a double watch was set for the night and the weary crew retired for rest. There was no sign of the enemy the next morning, so the boats made an armed search from Western Bay to the northern inlet without seeing a trace of them.

“They have gone away, but I think they will return,” said Harry. “They may or may not have seen our ship as she lies in the creek with a background of trees but we may expect an attack any time as they think we are only sojourners here and have some sort of a settlement which they will look

for, and finding, instead, a fine ship, they will risk a good bit to capture it."

Mr. Purdy that morning briefly gave them the account of the trip of the *Rescue*.

"We left, as you know, about ten o'clock in the morning and had a contrary breeze at the outset, but Andy managed to get out about twenty-five miles by evening. We saw the search-light ray as it was being moved up and down; it makes an effective signal too. We made but little progress during the night, and fought exasperating light head winds until after noon the next day, when we sighted the pirates and then turned for the island, our contrary breeze now being in our favor. About three o'clock they must have sighted us, and you know the rest. Andy shouted for joy when we sighted you and said in his quaint dialect, 'Now gebts feng!' which means, in ordinary English, 'Now there will be trouble.' 'How so!' said I, not comprehending the drift of his excited remark! 'Why, when Mr. Frank commences shooting you will see,' and we did see."

There was not much said about the fight; it was an unpleasant subject to all, but Andy, who could not conceal his delight at the way the freebooters had been received and surprised. The spirit of *Lex*

Talionis was ingrained in this honest Dutchman, who knew nothing else but right in dealings with his fellows, but this was coupled with a seaman's hatred for a buccaneer—there should be no mercy for them; whenever he saw one fall during the fight, whether by his hand or not, he shouted his approbation in terms not very polite, but in the most convenient tongue, and that was good Blue Mountain Pennsylvania Dutch.

Henceforth the utmost vigilance was observed. Our islanders could no longer lie down at night without a certain sense of insecurity that was wearing up them. It was a sore trial to have their mission fail. They had confidently expected to have relief sent them as soon as the *Rescue* could find a port. Not only was that hope dashed, but a new and awful danger confronted them. There could be no more of the pleasant expeditions to the interior for the present, for it was almost certain that their enemies would make a descent upon the island in the near future.

“Can they get through the Northern Inlet?” asked Joe.

“Yes! with the craft they had yesterday they might, and that's about all they have,” replied Harry. “It's just likely that they never paid any

attention to this island, which they must certainly have seen, for we have never yet found any certain evidence of their visits."

Everything that ingenuity could devise, was adopted for defense and by degrees the islanders grew accustomed to the situation. Not that their vigilance relaxed, but the constant menace gradually lost its force; perhaps it was from the fact that now a week had passed without a sign of anything. Provisions they always had in abundance from their stores as well as from the bountiful land in front of them, but the thought that their chances for escape should be despoiled by piracy, irritated them and this all the more because it fell upon them at this time.

It was, of course, agreed that the *Rescue* should again be sent out as soon as practicable as they wanted her to avoid the stormy season later on and for this reason had hastened her construction. A night watch was kept, the time being divided among the whole party. The search-light was used to sweep the bay and with this low steam was always kept in the boiler of the winch engine so as to be able to haul out of the creek at any time. Even Toby seemed to understand the situation, he always taking his turn with Joe, seeming to know that

something threatened the peace and safety of the *Katharine*, but as yet there was no cause for alarm. The dynamo was kept at work each evening so as to keep the storage batteries as fully charged as possible. Additional thick "OO" wires were divested of their insulation and so placed that a boarding party must naturally use them in ascending from the water to the deck. These were always ready to be thrown into circuit with the storage battery which was always charged up to "buckling" point. But time passed and there was yet no sign.

"I wonder whether our brush with them has put the matter to rest," said Frank one evening; "it seemed to me that they were so thoroughly surprised that they couldn't comprehend what had happened. Then again they may not have sighted the *Katharine*."

"How far were we from shore when night came on?" asked Joe.

"About four or five miles!" said Harry. "I could see the ship and I am afraid that they from their higher decks could see even better, and more especially if they had good glasses. It's just likely, too, that they have them, for they have evidently made way with several vessels of which the atoll can attest to two."

So they watched and reasoned but as yet there was nothing suspicious to note. They felt that there would not be any landing on the northern or western sides as nature had defended that better than could man, but if a circuit of the island was sailed and an approach made from the southwest, an enemy might find an anchorage in Western Bay, and then come in overland by crossing the Ridge, thus surprising them from an unlooked for point.

Harry often lamented that they had but one telescope and especially would another be useful at this critical time. In order that they might be secure from any sudden intrusion from Western Bay, it was found necessary to have a daily lookout from Mount Hope for a week at least. Mr. Purdy and Harry made the first trip; leaving the vessel at day-break in the *Rescue*, they proceeded down the bay to their former landing place and then, having secured the boat in a small cove so that the tides would not injure it, they made their way up the tree covered hill. Reaching the top they improvised a comfortable seat or rest for their vigil would be a long one. The view from here was always lovely, but on this calm, peaceful day, the picture came out in bewildering beauty. The ocean seemed as quiet as an inland lake. Far to the east the glittering waters

caught the rays of the morning sun, making a sheen of glory across a field of blue. To the south and to the west they could sweep with an uninterrupted view the calm azure waters, but there was nothing to be seen in the great desert ocean. With their glass they could see the mizzenmast of the *Katharine* above the trees in line and at the truck was flying the ship's flag indicating that all was right, for on the first suspicion of trouble the flag was to be changed for a pennant. To the north the island was dressed in the living green of vast forests of tropical trees. Tropical birds flitted like swift dashes of the most beautiful color against this background, all combining to paint to the eye a picture of rare beauty.

"I don't wonder!" said Mr. Purdy, "that Frank has so much fallen into love with this spot. It seems like perfect peace. Oh, if only we were viewing it under different circumstances! It brings back to me the grand view from the Storm King above West Point in our dear old land," and then the man of iron again became as a child in the hopeless reaching out for his loved ones.

Science has demonstrated that there is a magnetic current setting across the gap lying between the poles of a magnet. This invisible, yet active force

has been measured, its strength tested and then resolved into its very structural property, showing that it consists of an immensity of small invisible lines, called "Lines of Force." The lay world names it magnetism, and science has already demonstrated that these minute nerves, of which there exist many thousands to a square centimeter, which space one could cover with the little finger-nail, can be converted into a new power, with the proper conditions, and that this new power, although it is old as the solar system itself, can be projected into space, and if met by reciprocal instruments, may be used for the convenience and good of man. If the forces of nature may be gathered and distributed by inanimate bodies of metal, why may not hearts go forth in invisible forces until their affinity be found? In the grief of this strong man, who, with averted face, these things came uppermost: "Why cannot I send a message through space to my darling wife and child? What is there in nature to prevent it?"

Thus he pondered. Harry, sorrowing for him to the bottom of his heart, could only wait until the burst of grief was over, when Mr. Purdy arose and pointed to the southeast, as if in a vision.

"I feel as if our deliverance is coming! Something tells me! Let us hope it will be soon!"

There was no more said, but Harry, who had implicit faith in Mr. Purdy, could not help mentally commenting over the singular yet comforting speech. He had heard him speak of the beautiful prospect before them and then suddenly revert to home. He well knew how it would end. Then after his reverie he would start up and prophesy, as it were. But why did he point to the southeast? Harry mentally reverted to their position in the great Indian Ocean that lay all around them, and tried to think what this strange man had on his mind. He could not ask him for he had now strayed down into the forest to be alone with his thoughts. Nor would he ask him; it might be a sudden inspiration but he sincerely prayed it might prove to be a fact. The dreamy day seemed to pass quickly. Nothing could be discerned on the face of the vast waters that encircled them. Toward evening they made their way to the boat and by sunset were again on board with their friends. The following day Frank and Joe, accompanied by Toby, took the post of observation, but as the day before, there was nothing to be seen. Thus for a week they kept watch and then gave their attention to the east side only. During this time the *Edna* was taken to the Southern Inlet where all the beacons and buoys were put into order again,

with the addition of a notice prominently nailed to the first guide. It was a board, painted black for the background, the letters being in white. This was placed so that intending navigators could not possibly miss it, and was as follows:

CHANNEL

10 FATHOMS DEEP; 12 FATHOMS WIDE,
MARKED BY BUOYS.

DANGEROUS ROCKS OUTSIDE OF BUOYS.

Ship *Katharine* at North End of Bay.

Plenty Water Inside.

This was firmly attached with braces sunk into the rocky ground of the islet.

"Someone may see it!" said Joe, "and be guided in to us."

"If they come by daylight," added Frank, "you may remember," he added with a slight laugh, "we came at night!"

On their way back the little yacht was stopped at one of the islets and a supply of eggs gathered. Andy also found a lot of turtle eggs which were taken along. He had several times captured turtles but this was the first time he had found their eggs. They all enjoyed their supper that night. The following day was to be devoted to marking the Northern Inlet so the tired party, with the exception of the night watch who took turns, retired for the night.

CHAPTER XXVI

THE MONKEYS AND THE DYNAMO

THE following morning the usual careful survey was made from the mainmast, but it disclosed nothing. After this the *Edna*, with all on board but Frank, who remained on the ship, left for the Northern Inlet, taking with them the necessary implements for setting up beacons should they be required. They reached the end of the islet forming the ocean side of the entrance. The natural breakwater was the most northern of the chain forming the eastern shore of the bay and was in reality about four miles long, but in width it varied from one-quarter to one-half of a mile. Curving around to the west, it approached the mainland at its northern extremity, forming the Northern Inlet. The point where it ended they had named "The Tongue." Here it was their purpose to erect a beacon similar in nature to that at Providence Channel, or as they often called it the Southern Inlet. Toby was first ashore, delighted once more to race around on mother earth,

having had but one or two outings since the watch was kept up. He soon raised clouds of sea birds along the narrow strip, much to the amusement of the party, who had already commenced taking the soundings of the crooked inlet.

There would have been depth enough, and generally width enough for a large vessel to get through with great care had it not been that a sudden projection of the land narrowed it so much that only a small, light draught vessel might pass; otherwise this channel was in all respects superior to the one on the south. Our voyagers had surveyed it long since, but now wished to set up guides in case of a vessel coming to the island. They prepared a board similar to that at the Southern Inlet, informing vessels of larger size that there was a good anchorage in Western Bay. This done, the party slowly cruised along the inner shore gathering a supply of fine cocoanuts, which grew in profusion near the narrow beach. While Joe was removing the thick husk from one, Andy remarked that the fiber could be used for making light caps, whereupon Mr. Purdy immediately gave them an order for five, to be delivered as soon as possible. The problem of a clothing supply had been discussed before this and steps were now taken to have it renewed. When

they were cast upon the island each of the passengers had two full suits, one of which was at once reserved and one kept in use with whatever makeshifts they could devise, from clothing left by the men, but now, after more than a year's time, their stock began to show signs of wear. Andy promised to help out matters with a true sailor's ingenuity, by making light cotton suits if material could be found in the cargo, of which there was no doubt, the following day being fixed for the first trial when he wanted to make a coat for Joe. Some few of their ship's supplies were also demanding attention, too. They had long ago used the last of their sugar, but had made an excellent substitute for it from the product of the sugar palm, of which there was a profusion.

The island was estimated to have a width of eight miles and a length of fifteen, showing a superficial area of about one hundred and twenty square miles, exclusive of the outlying islands, and fully three-fourths of this surface was covered with palms of many varieties yielding fruits and products in themselves sufficient to support a large population. In addition to this there were many other varieties of trees and fruits, some of which our colonists had never seen before, but Master Binks never hesitated

in his selections when fruits were laid before him. This monkey tribe had grown to be somewhat of a nuisance. They, however, had acquired a holy horror of the dynamo. At first the singing of the armature attracted them in numbers; they held aloof for a while and then gradually drew nearer and finally overran the shed that covered the dynamo, but being unable to get into it, they sat there and then began investigating the belt from the Pelton wheel; this went on for some time but one evening before the storage batteries had been installed, when the light was still furnished direct from the generator, there was a hideous screeching near the shed, followed by flickering of the lights at short intervals.

"There's something wrong with the belt!" said Mr. Purdy, as they made their way out to the shore. When they got there they found that somehow two of the poor little creatures had gotten their tails into the flying belt and were converted into apes in an instant, their caudal appendages having been severed and were still involved in the belt, making the lights "jump" every time they passed over the pulleys, so sensitive is the electric current to the slightest irregularity of the power producing it.

"Guck amohl! eira schwentz sind op geschnitta!" said Andy excitedly in his Pennsylvania Dutch.

He always relieved himself in the mother tongue when anything was sprung upon him suddenly. No one but Mr. Purdy understood him but his odd expressions always raised a laugh. But the suffering animals had to be killed to get them out of their misery. The following day the belt was boxed in, effectually preventing a recurrence of such tragedies. This made the whole tribe somewhat shy until some of them began trapeze performances on the two main wires, which were left bare for defensive purposes. Before they became aware of the trouble, several had received severe shocks and raised such a commotion that the place was vacated and given a wide berth thereafter.

For about two weeks following the fight with the pirates, the party kept up its strict outlook, coupled with such duties as the occasion demanded. As the time wore on, confidence was again restored and they indulged in the hope that they would not be molested after all. Certain it was that the *Rescue* would make another attempt in a short time if nothing occurred to prevent it. They entertained no fear that the little craft would again be chased by their enemies; it had simply been an accident that they had been seen of them when they were at sea. That chance might not occur again once in a thou-

sand times. It was the defense of the *Katharine* that now held back the expedition. The stormy season would be upon them in less than two months, it not being thought safe for the *Rescue* to venture out then. It was felt that storms might be looked for at almost any time after six weeks. They had not seen any signs of the smoke signals either; in fact, the ocean seemed absolutely deserted. They were evidently out of the track of the East India trade or at least of most of it. "It may be," said Harry, "that plenty of vessels have passed and are passing within a single degree of us. They may want to avoid the atolls and thus give us a wide berth."

"How long is a degree in this latitude?" asked Joe one evening as they were all seated on deck enjoying the brilliant tropical moonlight.

"That depends somewhat upon the distance we are from the equator," said Harry. "All the meridians of longitude cross each other at the two poles consequently a degree of longitude at those points is simply nothing, but they are farthest from each other at the equator, where a degree is nearly seventy miles. Suppose you peel an orange closely, you will see that the divisions all meet at the place where the stem was broken off and at the opposite point,

and they are widest at the center. Now that is just the way the meridians of longitude run. We think we are about 7° and $15'$ south, so that the degree here has already diminished some. Degrees of latitude are seventy miles long and have the same length anywhere on the globe. Those circles, you know, as always parallel with the equator, which is the center line itself, being on the greatest circle that may be drawn on the globe."

"Well, that's all right, I know!" said Frank, "but why can't there be an East Pole and a West Pole, then the parallels of longitude would always be the same, too, at least it seems so to me now."

"I think!" said Mr. Purdy, "if Frank's idea was illustrated on a globe you would find that these new circles would form the most awkward kind of junctions with the lines of latitude. As a matter of fact, a golf ball is lined up that way and it strikes me it would make a navigator 'scratch his head and think' when some of these circles became tangent to others and——"

Suddenly there was a splash as if something had fallen heavily into the water. The party sprang to the rail and saw a dark object struggling in the creek. Throwing the switch they brought the search-light to bear on it.

“Es isht ein schwarzer!” cried Andy in his usual excited way.

“No!” said Mr. Purdy from behind his lantern, “it’s another monkey. He has gotten over on one of the ‘mains’ and met his fate as soon as he touched the other wire.”

“Another victim to ungovernable curiosity!” said Frank, “but it shows our wires are never asleep.”

“They aren’t so very dangerous!” said Mr. Purdy, “but I guess they will do to repel ‘boarders’ if it ever becomes necessary. Don’t you think so, Andy?”

“Dey is all right, yogewis!”

He always emphasized anything with this word which they now knew to mean “Yes, indeed!”

That night Frank Miller stood on guard to be relieved at midnight, but as usual he never woke up his relief, preferring to remain on duty the whole night. The moon was full, flooding the bay with light almost like day. To the east, the outlying islets were distinctly visible; now the rays had fully caught on Mount Hope which was standing like a great blue dome about six miles to the south, while beyond that the Southern Inlet was lost in the haze that softened every outline in nearer objects. For

a long time he paced back and forth, enjoying the lovely night; then Toby came up from his kennel and curled on the deck beside him, but the young man did not notice the faithful dog. With his head resting on his hand, he leaned on the rail, his thoughts far out over the ocean. Now, as in a dream, he saw the waters in that beautiful distant bay, with ships and other craft gliding hither and thither. Then Cape Town with that week of pleasure; then the awful storm, and now, amid all this splendor, it fell almost like a depressing weight. They were lost! lost! Dead to the world! Oh! when would it end? He thought of Purdy, whose iron nerve sometimes quailed before this same thought and could more and more comprehend the great love this man bore for his wife and child. Would the "Lines of Human Force" yet reach through space and by some mysterious process of telepathy bring their friends to this unknown land where nature's dreamy beauty was simply a mockery. How often he had heard it told "The promises of God are sure" and He promised that "where two or three are gathered together in my name, there am I in the midst of them!" Had they not often prayed for deliverance? Then again came back to him the prophetic words of cheer and cour-

age as they were uttered to Joshua. So he mused and watched through that brilliant tropical night.

Had some good angel given him the power to see through that hazy beyond, at that self-same moment; what would he have said?

CHAPTER XXVII

A MOST WELCOME SIGNALING.

THE next morning Andy reported that the stock of naphtha was running low, there being only about one barrel on hand, so it was decided to leave Frank in charge of the ship again and proceed with both boats to Western Bay, then to Oil Creek, where a supply would be distilled. In order that the party might remain in close touch with each other, Andy was left off at the foot of Mount Hope, whence he proceeded to the lookout, from which point he could signal by their code to the party in case he received a signal from the *Katharine*. The two little boats made their way around Promontory Point, arriving in Western Bay about the time Andy had reached the Mount Hope beacon. They saw his signal, telling that all was well, and then made their way into Oil Creek, following it until they reached the oil still, which was found in good order. From here they could again see Andy's signal. They now felt that they were secure from any sudden intrusion and went to work at once. The still was filled and care-

fully closed with the iron clamps and then crude oil was slowly fed into the fire place and ignited. In due time the vapors began passing into the long pipe laid in the bed of the creek and finally the fluid naphtha made its appearance. This was caught in vessels prepared for the purpose and then transferred to the barrels on the *Rescue*. This operation was repeated until the afternoon when they had sufficient naphtha for some time to come. They, however, continually kept the signal in sight, noting with pleasure that it said all was right with the ship.

When the convoy arrived at the mouth of Oil Creek, they telegraphed to Andy to leave his position and meet them on the Eastern Bay. The breeze having died down, the *Edna* towed the *Rescue* around to Providence Channel. After entering the bay, she cast loose and picked up Andy, who was awaiting them on shore. When they reached the ship a good supper awaited them, Frank having become quite proficient as a cook.

They gathered on deck again that evening to spend a pleasant hour before retiring, the conversation touching various subjects, turning on the method of communication they had adopted during the day.

“Would it be difficult to erect and install a telegraph line throughout the island?” asked Harry.

“No! it would not be very difficult to build and equip, but the greatest trouble we should now experience would be with monkeys,” said Mr. Purdy.

“In some parts of India, I remember, it became necessary to substitute fairly strong rod iron for the ordinary No. 9 wire, because the monkeys made a plaything of it, breaking the wires continually, and I imagine that would happen here, too.”

“How is a telegraph line worked?” asked Joe.

“The telegraph of to-day, in its ordinary form, is very simple. First the route is selected, let us say along some public road, or let us imagine from here to the west coast. We might use trees as a substitute for poles, nailing our glass insulators to them, hanging the wire, usually a No. 9 galvanized; stretching and securely fastening it to the insulators which, as a rule, are of thick glass and are bell-shaped so they are dry inside, in any weather. This keeps the current from traveling down the wet poles in rainy weather. Now, suppose we place two offices on it, one here and one at the other terminal; in our case we should not need a battery to supply the current; we could take it direct from the dynamo,

but it would have to be reduced in strength very much before it became available. Now we have the line and the current. The distant end, as well as ours, is connected with the earth, which in itself seems to be a vast reservoir of electricity, and then the instruments are placed. There are only three; a key for opening and closing the circuit, a relay magnet, for indicating the breaks in the current, and an auxiliary instrument called a sounder; which is worked by a small battery of its own and is entirely independent of the wire current. This instrument simply repeats loudly what the relay says, as the latter is rather a delicate instrument and often does not "speak" loud enough to overcome extraneous noises, such as passing trains, etc.

"But in cases of necessity, this latter instrument can do all the work, dispensing with the other two. It consists of two cores of the purest and softest iron, say two inches long and one-half inch thick; these are carefully wound with a fine-silk covered copper wire, usually about a No. 32, which is about as thick as a coarse thread, until layer upon layer is wound, the quantity being determined by the resistance wanted. Then these two spools are fastened to a cross piece, also of soft iron exactly like the yoke piece of our dynamo. There are now, of course,

four loose ends; two of these are connected to each other, and the other two to the main line, so that the current coming from the main source enters the office, goes through one spool, then crosses over the connection and goes through the other and out to the line again. The instant this occurs, those two cores become a magnet and remain so, as long as the current of electricity passes. Remember that the electricity has no connection with the iron whatsoever, yet in flying around it in the insulated copper wrapping, it makes magnetism, something entirely different in nature, and this is the germ of the whole thing.

“Now to use these two strange agents, we place before the two exposed ends of the iron cores, a loose cross piece of iron held by set screws, so that it may be attracted freely, and then we fasten a small spring to it to draw it back again when there is no current. This cross piece or armature, has a brass upright fastened to it that strikes between two points, one is struck in going toward the magnet and the other when the spring pulls it back. This beating is read by sound by the operator, the letters being made with dots and longer intervals called dashes. These names come down from the time they used an instrument to work on paper, called a ‘register.’ They

have gone out of use almost entirely, now, and the sprightly little sounder has taken its place."

"I suppose," said Harry, "that all the original instruments were crude and heavy, weren't they?"

"Well, yes, they were; the first 'relay' that Morse made weighed one hundred and eighty pounds itself."

"That's more than the instruments of a modern office weigh now, including the operator," said Frank, which sally raised a general laugh.

"But how does the ocean cable work?" asked Joe, who never lost a word of Mr. Purdy's descriptions.

"In those instruments as originally constructed, there is no iron core to the copper coil, which was wound on a short, hollow cylinder; inside of this was suspended a small mirror and fastened across its back was a light steel bar. This mirror was hung from the top of the coil on the inside by a delicate gossamer thread; when the current passed through the cable this mirror swung and returned to its first position, according to the breaks made. Then there was a strong lamp or light placed so that its rays were focused in this mirror. When the current was broken, it moved and reflected a ray of light back and forth on a place prepared for it and in that

way the messages were read. They have another kind now, however."

"Why that's just the way our code (he always modestly said 'our' code, although it was his own idea) is made on the sky with the search-light, by a ray of light moving up and down."

"That's it precisely, my boy! Your code is read in the same way, and, so far as I know, the idea is original with you."

Then arranging the night watch, they retired for much needed rest.

During the time that passed after the encounter with the pirates, the party did not simply stay on shipboard. They could, of course, make short trips during the day almost anywhere with entire safety, as they had such a view of the ocean that a vessel could be seen for hours before it could make a landing. So Frank often wandered in the forest with Joe and Toby for companions, sometimes in the neighborhood of Fairy Lake, then again to the high bluffs on the north shore. These trips were a never ending source of pleasure to Joe, for they made many interesting discoveries on their different routes. He captured a pair of young parrots one day that now could speak with facility. Andy also had caught one and gave it a course of his dialect Dutch. These

little creatures, along with Binks, often helped to while away time that might otherwise have hung heavily on the hands of the colonists.

Frank visited his pheasant grounds often, but forbore from shooting any of them after he saw their happy bird life. The pheasant dances so often described, but not explained by naturalists, they often saw and admired. Nothing was killed except when actual necessity demanded it. Of reptiles, as has been said before, there were none, but in the harbor they several times had seen dangerous sharks. None of these ferocious monsters escaped Frank's unerring rifle, if they approached near enough to show a vulnerable part. When bathing was indulged in, it was always done in the lake or at the foot of the falls. Their water supply was abundant and pure; this, with a diet mostly vegetable and plenty of outdoor exercise, kept the party in the best of health. From a pale boy of only ordinary physical strength, Joe had grown in stature and weight, beaming with health and vigor. He had acquired a thorough mathematical training from the daily instructions of his companions, and with this Frank took especial care to make him an excellent shot with gun or revolver. They were all thankful for the glorious health they had enjoyed at all times.

Had it not been for the feeling of isolation which, when their minds were not engaged, always made itself felt, the island would have been a paradise.

In the summer, or dry season with its excursions and work, this lonely feeling was not so oppressive, but the danger lay in the days of confinement to the ship during the dreary rainy period. It was hoped that the danger of an attack by their enemy, was among the things of the past, so departure of the *Rescue* was fixed for the beginning of February, which was now only a week away. Everything had been done to the little craft necessary for the comfort of her passengers as well as its own safety. Frank had also placed the *Edna* in perfect order so that there was but little to be done but wait for the time of departure. Their dynamo was working smoothly, supplying them with light and heat for all their cooking of vegetables and meats such as they used; it, however, was nearly short circuited by the troublesome monkeys once or twice; notwithstanding the fact that they were very much afraid of it. Sometimes they would get on the harmless looking mains, giving Andy much concern, as Mr. Purdy told him if those wires once came into contact when the machine was generating electricity, he would see an exhibition of fireworks winding up with a

wrecked armature and no means of repairing it. This danger was finally overcome by sinking two short, strong poles into the bank, to which the wires were securely attached and well separated.

Neither had they seen any more smoke signals in the north, so that their departure would be made without any doubt as to the safety of those left behind.

It was thought best, however, before starting, to make a trip to the west coast to see what might be found there, it having been some time since they had made the journey. The exploring party consisted of Mr. Purdy, Joe and Andy, the others remaining with the ship. The old route was chosen because of familiarity with it; so after breakfast the party embarked in the *Edna*, which Frank ran up to Singing Falls, where they bade him good-by and set out upon their journey. The irrepressible Toby was in the van, bounding hither and thither as usual, terrorizing the numerous small game, but they had not left Fairy Lake but a short distance behind them when they heard him in a noisy combat with some animal. Growls of rage, mingled with yelps of pain, were heard as he thrashed around among the dry leaves. Before Mr. Purdy could stop him, Joe ran to Toby's rescue and found that he had engaged with

a porcupine that had bravely defended itself with its sharp quills, several of which were sticking in the dog's hide. Not wishing him to injure the animal, Joe held the struggling dog while his plucky little antagonist made its escape.

"This is your second fight with hedgehogs," said Joe to Toby, "and you always get the worst of it."

Mr. Purdy warned the party to be careful how they advanced into any fight that the dog might bring on, for they were not yet entirely sure that there were no dangerous animals on the island. After extracting the quills from Toby's body, they proceeded on their journey, arriving at the ruined temple at noon. Pausing only long enough to take a drink of refreshing water, then plunging into the forest they resumed their journey without interruption until the ocean was sighted in the west.

Carefully examining the coast, they proceeded along the cliffs to the Northern Beacon, which, as yet, was not visible.

"Can it have blown down?" said Mr. Purdy. "It seems to me it was made extra strong, as the lower part of it was a living tree."

As they approached it was very evident that the beacon was not in place and when they made the

point where it should be, there it lay on the ground, close to the tree that had held it.

"It has been cut down," cried Joe.

"Do isht etwos lets!" said Andy excitedly.

Mr. Purdy said nothing but closely examined the tree.

"Yes! it has been cut down, but who could have used an ax up there?" said he, pointing up the tree to where it had been joined.

By this time Andy had climbed up and then called out:

"Dis wasn't cut down mit an ax; it was chopped down mit a saw, guck a mohl!" said he, pointing to the clean edge of the fallen spar.

It was even so; and for several moments nothing was said, then Mr. Purdy told Andy and Joe to get everything ready for an immediate return to the ship.

"We will go along the north shore," said he. "If any party has landed there we will see the boats, although I don't think anyone could land on the coast. On the other hand, if any undesirable persons have landed in this neighborhood we shall prefer meeting them on open ground. This has been cut down within the last few days. See where it has barked the tree; it is quite fresh yet!"

They could not see any other signs of the marauders, but at once prepared for their route along the north shore, there being fairly good traveling on the open ground between the forest and the edge of the cliffs. It need not take over three hours to reach the Northern Inlet; from which point they might signal to the *Katharine* to send for them. Before leaving the fallen beacon Joe called Toby to the spot and tried to have him scent the tracks of the strangers, for it was presumed there was a party. The dog came eagerly and for a few moments nosed around hunting wherever Joe sent him, though he did not seem to comprehend what was wanted, but Joe did not give up; taking him to the beacon tree, he tried to have him catch the scent of any person who might have been there.

"He can't find dem dat way!" said Andy. "I was just up dere."

"So you were. I had forgotten it," replied Joe.

"Try him on the ground," said Mr. Purdy.

Again the dog was brought to the tree and Joe slowly walked in a circle around it, pointing to the earth, Toby eagerly sniffing the ground and whining as he tried to find the imaginary thing that his young master was hunting. Suddenly he stopped with his nose to the earth, then turned off at a

tangent, running toward the cliffs on the north side with Joe after him, urging him on, Mr. Purdy and Andy following closely. The intelligent animal was not a thorough tracker, but he at last seemed to know what was wanted. Several times he lost the trail, but as often found it. Suddenly he stopped on the edge of a bluff about forty feet above the shore which formed a little cove at this point. Looking down the slope, Joe cried out:

“Here are tracks in the loose soil!”

Following them down to the narrow beach, they saw where a small boat had been landed. There was nothing visible out at sea now, but when they regained the top of the bluff, they saw a sight that made them stare in amazement. Away in the north a column of dark smoke was ascending skyward, just as they had seen it months before.

“We will have about ten miles to cover to reach the ‘Tongue’ at the Northern Inlet,” said Mr. Purdy. “We must get back to the ship as soon as possible, and it is now three o’clock. We can do it by half past five by rapid march; that will leave us something over half an hour to try to signal the ship. They will see us, I am certain, for Harry is keeping a sharp lookout at that point even this minute, if he has seen the smoke.”

Hastening on, they reached the slope from the high ground to the inner bay just a few minutes after the time they anticipated. Improvising a signal from some large palm leaves attached to a bamboo shaft that Andy had obtained, they went out to the point and waved their flag to and fro. The distant ship was distinctly visible. Then they saw a flag ascend the mainmast, and they knew that they were seen. Mr. Purdy sent in the message by the code, a copy of which they always carried, which was responded to by dipping the ship's flag, the distance being too great for the unaided eye to read signals and they had no glass.

"They see us and understand!—see, there goes the *Edna* out into the harbor," said Joe, pointing to the gallant little yacht that was just visible at that distance.

Frank came in the *Edna*; calling to them to go to a point a little further to the right, where he could receive them better, he steered the yacht to the point indicated. As they stepped in from the yacht Toby broke away from them and ran toward the point of land at the inlet.

"Get him in quickly!" said Frank, "we have no time to lose. I'm afraid we are going to have unwelcome callers."

Joe hastened after the dog who was now near at hand again, whining and anxious to be followed, but he was peremptorily checked. When Joe reached him he observed a singular looking object on the ground near the dog; he hastily picked it up and then bundled Toby into the boat, where all examined his find.

"A kriess!" said Frank. "Don't you remember, we saw some in the Malaysian exhibit at the World's Fair?" turning to Joe.

"That settles it!" said Mr. Purdy, as he looked at the murderous, crooked dagger. Then, relating their adventures to Frank as the yacht sped along, he added: "And now I am convinced the visitors were pirates and they have been here reconnoitering, and most likely cut down that beacon to draw us out, but fortunately we did not go."

During this narrative, Frank, who had given the boat over to Andy, did not say a word. When Mr. Purdy finished, he simply said:

"What makes it still worse, there are now three pirate craft standing in toward the island, not over an hour away. I was just starting for the Tongue when you signaled. You can see them beyond that islet now. Your story makes it certain that they have explored the coast and will come through the

inlet, and attack us. We have seen them for the last hour and thought possibly they might have to stay outside to-night, but the evidence you found shows they have been here in a small boat, probably, and have explored the shore, and worst of all, they know that inlet now."

"Can their ships get through?" asked Joe.

"Yes! if they are careful, for they have good sailors among them."

"How about the tide? You know it was on the ebb when we left," said Mr. Purdy.

"All in their favor! They may have to stay outside for a little while, when the tide will change. Oh, their schedule has been well studied!"

"I wonder why they come at night?" said Joe.

"Probably there are some unpleasant recollections of their first encounter with us and that was in daylight," said Mr. Purdy.

"I think," said Frank, "that their idea now is to surprise us. They may have intended lying off the island out of our sight until dark, then steal in. We thought of that when they first came in view. Something made them change their plans, if that was their plan."

"Maybe they had some cause that made them do it."

"It could only have been a cruiser," said Mr. Purdy, "for they would have attacked a merchant ship."

"I wish one were here now. This is going to be an ugly fight. I dread it, somehow," said Frank in an undertone, with his eyes fixed on Joe, who had now moved up to Andy in the bow.

"Yes, I see! on his account," nodding in Joe's direction. "I wish he were not in it."

When the *Edna* reached the ship, Harry welcomed them back and immediately a council of war was held. The inlet was now obscured in darkness but the pirates were still several miles out and would hardly make an attack for an hour at least.

"Will they use boats?" asked Joe.

"No! I think not," said Harry. "They don't fight that way; it will be from deck to deck; then they will close in and grapple with us. We have raised steam in the boiler to haul out of the creek, if necessary and have the hose attached to the boiler and dose them with steam and hot water, if we can. That will be your work, Andy," whereat the faithful Dutchman fairly beamed.

Winchesters with filled magazines were distributed around; some even were placed in the tops.

Each one had revolvers convenient. The dynamo was started, as Mr. Purdy did not wish to draw on the storage batteries until absolutely necessary. None of the arcs were turned on; only the incandescents below deck were switched in. Andy's hose was attached to the boiler, a monkey wrench being fastened to the "blow-off" so that it could be turned instantly. Mr. Purdy carefully adjusted the searchlight to its best power, and now nothing more remained but to wait.

"Try the inlet!" said Harry.

The switch was thrown on; in an instant the mighty silver beam, urged by one hundred and ten volts' pressure, shot up into the heavens and was as quickly dropped down to the sea, catching the "Tongue" in the broadened ray.

"There they are! Three of them; the last has just gotten in," exclaimed Harry. "With this light breeze they will be here in about half an hour."

So the brave little party stood there behind the great electric lantern, watching the oncoming of a bloodthirsty enemy, who alike was stimulated by expectation of plunder and thoughts of revenge. Fearful odds against them!

"Oh, if we had only planted a few torpedoes!

Wouldn't this be a beautiful chance to test them?" said Purdy, never taking his eyes from the slowly approaching vessels.

"It's well for us that we are lying bow out to the bay," said Harry, for the vessel had been drawn out and turned almost weekly.

"Why?" asked Joe.

"We will try to cut down any that cross our bows," replied Harry. Then to Mr. Purdy:

"Shut her off for a while; we don't want to guide them too well."

As he did so, a cry arose from Andy.

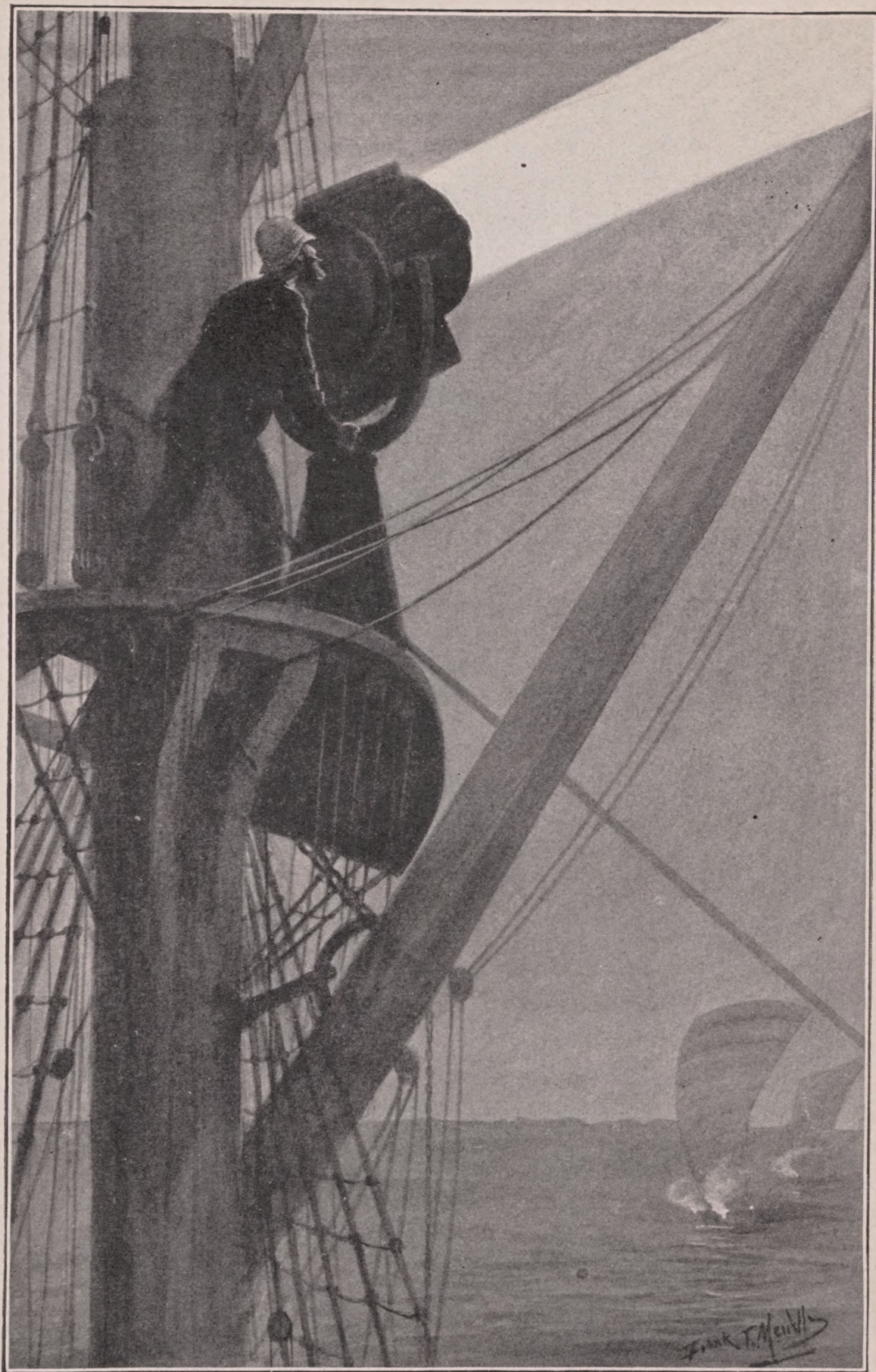
"Guckamohl drous uf der say!"

As they turned they saw a broad silver band of light gleaming over the waters of the outer sea, just in line for the *Katharine*, but one of the islets that stood higher than its neighbors, cut it off; then the light soared up into the sky to the north and steadily made a signal by raising three times, then again six times; 3—6.

"Is that the *Katharine*?"

Before the beautiful messenger of light had quite finished its signal, the little crew read its import with a cheer. Then Mr. Purdy rapidly answered 3—I—"This is the *Katharine*."

Then came 4—2—"This is the *America*," and



"This is the Katherine." — Page 298.

following it rapidly, Robert Purdy saw flashing in the sky:

"Is Robert there?—This is Margie."

"Oh, dear Father, we thank thee! It's Margie herself," almost gasped the strong man. Rapidly signaling in return:

"Yes! thank God, all well. Come in by Southern Inlet. See beacon. Narrow channel——"

"Turn on the pirates!" shouted Harry's clear, ringing voice.

Down came the beam, showing the enemy only a few hundred yards away. As the light fell on the crowded deck of the foremost, a shot rang out from the *Katharine* and two dropped; then another and another; then a fusillade poured into that bright target, the enemy scattering like sheep before the awful hail, but the vessels came on. Now, the second fell into the white line; they, too, received a volley, but the infuriated freebooters began to return the fire and bullets came singing through the rigging of the *Katharine*, aimed too high at first.

At this juncture, Frank called to Mr. Purdy to cover the helmsman of the nearer boat. As the light fell upon him he dropped like an ox before Miller's unerring rifle. In the meanwhile, the rest were busy pouring fire wherever an opportunity showed itself.

Suddenly Harry called to Andy to start the winch. "*Full speed!*" he called. "Now Mr. Purdy, over the bow!"

As the cable rapidly wound in over the drum, the noble ship began moving out, the search-light showed one of the enemy trying to steal across the bow of the stately ship that now slid out as if by magic. In half a minute more, Harry shouted:

"All hold!" There was a dull crash and breaking of timbers; a tall lateen sail keeled over to the water as the *Katharine* crashed into the pirate hull; then a discomfited yell arose from the buccaneers, none of whom even made the forechains of the great black vessel that suddenly towered over them like a horrible thing.

"Hold the engine!" shouted Harry. "Look out for the rest!"

As the search-light swung around, there was a crash of glass and the faithful electric servant that had done more for them than they yet knew, died out, a bullet having penetrated its mechanism, leaving the combatants in darkness amid the singing of bullets that were flying dangerously close and the yells of the demons who had expected an easy capture.

But for the few torches of the attacking party,

the combatants would have been in total darkness. The *Katharine* had again gotten out into the influence of the flood tide and swung around with the bow to the north, being held by the anchor in the bay, while the second and third pirate vessels, that had been so rudely repulsed, swung out into the bay in response to calls from that direction, leaving the beleaguered ship for the time.

Hastily summoning all together, it was found, to their joy, that none were hurt. Mr. Purdy resolutely stood by his search-light until it was disabled and then took his place on the deck, firing at anything in sight. The enemy were just getting their fire lower and evidently made the search-light a target.

"This time!" said Frank Miller, extending his hand to Mr. Purdy, "we owe our safety and the victory thus far to your skill and courage." But the brave man thought only of the events that occurred before the fight. Like the first encounter, the affair did not last over fifteen minutes.

"I wonder what they are doing out there," said Joe, pointing to the direction of the few dim lights yet shown by the enemy.

"I think they are assisting the one we struck with our bow," said Harry. "We damaged him badly,

I think. I heard the upper works giving way as we hit him. We didn't have the speed to sink him, but it was a close shave."

"Probably they will stand by him until daylight; he's no doubt leaking badly," said Frank.

"That's about it," replied Harry. "They will keep him afloat and to-morrow, when they see what a small party we are, will resume the fight. Our only salvation now is to have the *Edna* ready for instant departure if they get the better of us. We know the *America* is outside and may yet have to fly."

There was a profound quiet on the ship; beyond the pounding and working at the damaged pirate vessel nothing was heard, but a watch was kept up on all sides and vigilance was not relaxed. On the shore, the rush of the Pelton wheel could be heard but the dynamo showed no sign. When the ship had pulled out of the creek, the two mains from the generator were carried along until stretched taut and then, snapping off at the main cut out, they fell together into the creek, releasing the load for an instant. Then the abandoned wires now lying in the bottom of the creek, came into deadly contact, flashing fire even under the water. With a wail, almost like a living thing, the fast-flying arma-

ture strained against the mighty influence of its own current.

The overwrought network of wire winding became heated gradually to incandescence; a flash of fire, and the noble machine met its doom, its metal heartbroken, no more to throb with lightning rapidity its pulsation of that mysterious power that its masters had transformed for their comfort and convenience. It had committed an involuntary suicide, and even now the dismal whir of the frayed out ends of the wire sections could be heard by those who had cared for it so long.

"I was afraid that might happen some time," said Mr. Purdy, "and had intended fixing it differently, but these savages that they are, left us no time for that."

"Is the search-light damaged seriously?" asked Frank Miller.

"Yes! That is, it could not be fixed to-night," said Mr. Purdy. "A bullet cut through the carbon holders bending and breaking matters; then it came out of the back of the lantern. Their firing was very high, otherwise we might have suffered. You will see they will try their guns again to-morrow," said he.

The little crew set to work and fully equipped

the *Edna* with everything valuable to them so that, if pushed, they could leave immediately. Andy begged to be allowed to take the *Edna* down the bay, then slowly drift back to the enemy, now fully a half-mile out from the ship; when once alongside, he would, under cover of the almost impenetrable darkness, with the aid of petroleum, fire the whole fleet. The faithful fellow never once reckoned on the danger to himself, but excitedly ended up his request with "Ich date gleicha de horneasla recht rous brenna!" which, freely translated, meant, "I should like to burn out these hornets."

But the risk was too great, so he was not permitted to go.

"If the little yacht were entirely noiseless!" said Frank, "it might reach, the plan might work, without detection, but they'd hear her and you would not be able to escape. No! you may have a chance to warm them up with live steam to-morrow; it helped us out once before and now may do it again."

CHAPTER XXVIII

SEARCHING FOR NEWS

ON the 23d of January, 1894, the yacht *America*, from New York via Cape Town and Samoa, steamed majestically into Port Phillip, Australia. The following is part of an item taken from the Melbourne *Register* that evening:

“ There was but one passenger, Mr. John Littell, her owner, whose family, Mrs. Littell and Miss Helen Littell, with Miss Williams, a companion of the latter, have remained at Samoa with the mother, who will probably stay there a year for the benefit of her health. The *America* will remain in Australia for several months as Mr. Littell is heavily interested in the wool trade, and will probably make an extended tour to the interior, with his correspondents in this port, Messrs. Lamb & Co., for the purpose of looking over the ground preparatory to purchasing several sheep ranges. The *America* reports having passed through the edge of a terrible

tornado that seems to have been central west of Java, extending far into the Indian Ocean."

Mr. Littell departed for one of his trips into the interior about a week after his arrival, the yacht, in the meanwhile, having been docked for the purpose of making some repairs which would require a couple of weeks' time.

On February 5, the *Register* contained the following account of disaster:

"The Br. ship *Meteor* from Batavia arrived here to-day. She brings with her the captain and part of the crew of the ship *Katharine* from New York, bound for Hong Kong. They were picked up at sea. Both ships were caught in the hurricane that raged on the Indian Ocean last month. Captain Warner, of the *Meteor*, says for two days their ships tossed within sight of each other, once escaping a collision as by a miracle. The lightning was terrific for days without cessation. After the vessels had cleared each other, the *Katharine* was struck by lightning and set on fire. Captain Duncan of the *Katharine*, was seriously injured. The crew of the ship, under Mr. Henderson, the first mate, fought the fire with all available means, but without suc-

cess, until at last the order for abandoning the vessel was given. The first boat was gotten off safely, but at great risk. Then the second boat carrying the unconscious Captain was launched into the storm. The last boat,—the smallest—was left for Mr. Henderson; one of the crew, and three passengers, among them a young brother of Mr. Henderson. Before the boat could be gotten from the davits, a huge wave struck the side, smashing the little craft to splinters. The crews in the other boats were struggling in the mighty seas and could not render any assistance, being hardly able to even manage for their own lives.

“In about an hour or more, while they were yet tossing on the waves about a mile from the ship, they saw a heavy cloud of white smoke arise from the fated vessel, then night closed in and they saw her no more. Many of the men wept like children at the sight; they had sailed with the first mate since he was an artiled boy before the mast.

“Mr. Henderson and his brother are sons of Captain Henderson, principal owner of the Red Cross Line. The American Consul has cabled the New York office, from which arrangements were made at once for transportation of the crew to their homes. Captain Duncan, who was struck by light-

ning, is as yet in the Episcopal Hospital, slowly recovering from the shock.

“One strange feature in the disaster consists in the fact that when night was setting in the struggling boats saw a heavy cloud of light colored smoke arise from the ship which was supposed to have been an explosion of some part of the cargo as no fire was seen in the darkness. This may have brought the sufferers quickly to an end of their awful trouble.”

When Mr. Littell returned to Melbourne, and read the foregoing, he hastened to the hospital to see Captain Duncan, who corroborated the newspaper account as far as he knew it, having been unconscious from the moment the lightning struck the vessel until some time after they were picked up by the *Meteor*. The Captain was much depressed by the loss of life on the *Katharine*, being especially fond of “his boys,” as he called Harry and Joe. Mr. Littell insisted upon taking him back with the *America* to San Francisco via Samoa, and from there by rail to New York, as the *America* would remain in Melbourne for some months more, by which time it was hoped he would be fully restored to health. This kind invitation was gratefully accepted by the captain, who as yet had but little power

in one of his limbs. Every possible fact in regard to the unfortunate vessel was hunted up by Mr. Littell, and to this end he sought the captain of the *Meteor* who could not add anything to the facts already known.

He also wrote to Miss Helen Littell at Samoa, communicating the dreadful news, and cautioned her not to say anything to her mother for the present. John Littell was a man of tenacity when a subject once interested him, and to this very quality he attributed his success in life, having held on and succeeded when others let go and failed. He could not dismiss the disaster from his mind, even though he would. What should cause an explosion on the *Katharine* when Captain Duncan told him that, as far as he knew, there was nothing of an explosive nature in the cargo except some cases of cartridges and they were in a distant part of the ship. He reluctantly accepted the fact of her loss when Captain Warren of the *Meteor* told him that the chance for weathering the hurricane was very slim with the small crew they had left on the *Katharine*. Captain Duncan, on the other hand, said that little more could have been done than to hold her to the seas, for everything was snug and tight.

“Unless,” he added, “something should give

way under the strain, then a disaster might have followed as there was not crew enough to remedy it."

"But," queried Littell, "what should cause an explosion and yet cause a cloud of white smoke? Nothing but powder would cause that and you say there was none in the cargo except some few cases of cartridges and they were remote from the fire. Could there have been anything else?"

"Is naphtha explosive?" asked Captain Duncan. "I know it takes fire readily and must be handled with great care; but is it explosive?"

"Well, yes!" replied Littell. "If it escapes in a confined space, being very volatile it forms a highly explosive gas when mixed with sufficient air. But why do you ask?"

"Because we had two barrels on board stowed forward in a well ventilated place, almost in the open air; it belonged to a naphtha yacht we had in cargo, being intended for some special purpose. I knew we were required to stow it at that place on account of danger from fire. The underwriters' rules are strict on this point."

"Then," replied Mr. Littell, "it may have been ignited by fire even after the vessel was struck the first time and from this came some sort of an explosion, but it wouldn't make a dense white smoke."

One beautiful day toward the close of May, a fall month in the Southern Hemisphere, the *America* glided out of the harbor of Melbourne bound for San Francisco, after a stop at Samoa. On the deck were Mr. Littell, Dr. Peale and Captain Duncan, the latter having completely recovered from his injuries, and in due time the yacht anchored in the reef-bound harbor of Apia.

As Doctor Peale had recommended; the programme was carried out as originally intended. Mrs. Littell's health showed such a marked improvement that a permanent cure was now looked for in even less than a year's stay there. All news regarding the loss of the *Katharine* had been carefully kept from her, even to quartering Captain Duncan at a hotel while in port, so that she might not see him, but when Helen saw him, she could no longer keep back the flood of grief that was weighing her down and which the bluff sailor tried to assuage by asserting that there might yet have been an escape made, yet in his inmost heart he did not believe it to be a fact.

As fast as papers from the outer world reached Apia, Helen and Miss Williams would scan them carefully, cutting out any reference to the loss of the *Katharine*. Thus they treasured every scrap of in-

formation or news as melancholy mementoes, carefully arranging them in a blank book procured for the purpose. Anything bearing on the subject of derelicts or messages found in closed bottles carrying news, even though sometimes frivolous, found its way into that scrap book that Helen, with Emily Williams, had so carefully collated. John Littell looked over the book in the almost vain hope of finding some grain of comfort, but closed it with a sigh. As he did so, Helen gave him two clippings she had held in her hand; taking them, he read as follows:

“*Hong Kong Courier*, March 21, '94.—The English tramp steamer *Avon*, arriving here yesterday, reports having seen a small balloon going east while in Lat. 9° South—Longitude 100° East on the afternoon of March 2d. With a good glass the letters ‘A T’ were made out, they being part of some name painted on it in white letters. It is supposed it was sent out by some exploring vessel for scientific purposes. It came from the west and was soon lost to view.”

The second was a memorandum dated Apia, April 25, 1894, given to the American Consul at Apia

and by him related to Helen Littell, who made the following note:—

“The Captain of the bark *Stella* arriving at this port to-day reports having seen a balloon in Lat. 10° South, Longitude 102° East, on April 1, 1894. It was evidently sent up from some passing steamer; there was a name painted on it in white letters, but owing to the distance but two letters, —‘N E’— could be made out. It came from the west and was not flying very high.”

John Littell read these two slips carefully and then looked at Helen inquiringly.

“What do you make out of them?”

“This!” said Helen; “here are two balloons and you will observe they were seen in almost precisely the same locality, both coming from the west; both *named*; on one they catch ‘A T,’ on the other they make out ‘N E,’ and yet sent out a full month apart. No! I do not believe they came from some scientific expedition at all, nor from a passing steamer, but from some fixed point to the west of Java. Allowing for the wind, which the captain of the *Stella* said was strong, this balloon may have traveled some hundreds of miles and evidently was losing

its ascensive power. I imagine it had been floating say 30 hours at 30 miles an hour."

"Well?"

"And evidently came from some land that distance west of Java!"

"But the charts show nothing but some atolls in that locality!"

"Yes! I know, but they could not come from a watery waste."

"No! that's true; but there is one more feature that impresses me now," said he quickly.

"What is that?" asked Emily Williams, who had now joined the conversation.

"Why! the letters 'A T'—'N E' are four out of a possible nine forming the name of KATHARINE."

Helen's face paled as he said this; and then he added:

"I will use all means to try to solve this and, if necessary, make a personal search, but the chances are exceedingly slim, I regret to say."

"But my hope is strong, dear father——"

Then the conversation was brought to a close by the entrance of Mrs. Littell and Dr. Peale.

Through the still hours of that tropical night Helen lay awake; again and again listening to the

whisper of glad Hope. In the distant murmur of the surf on the outer reefs she could imagine another shore; far, far away; in the great beyond; where anxious hearts might be listening to that same restless song of the great Indian Ocean; almost hopelessly imprisoned upon a lonely shore.

Sweet was the blessed hope she now cherished in her heart. As she at last sank in slumber she dreamily remembered the prophetic words of the evening text she read before retiring "And now abideth Faith, Hope, Love, these three, but the greatest of these is Love."

CHAPTER XXIX

A BUREAU OF INFORMATION

AFTER remaining at Apia for a week, the *America* set sail for San Francisco, arriving there about the middle of August. Here the yacht was put out of commission; the crew sent home to New York by rail, with the exception of a few who remained to take care of the vessel until she was wanted to return for Mr. Littell, about the close of the year. A week later Mr. Littell and Captain Duncan entered Captain Henderson's office at the foot of Broadway. A lady dressed in deep mourning, accompanied by a pretty girl of about nine, was sitting there engaged in earnest conversation with the captain, who excused himself and arose to greet the two newcomers. His voice almost failed him as he grasped Duncan's hand and then recovering himself, he turned and introduced the callers to Mrs. Robert Purdy. When Captain Duncan's name was mentioned, she reached out her hand and then sank back into her chair in an agony of silent grief. Each of those three stricken hearts knew its own story, but now face to face with

one who was in part a witness to the awful tragedy, it came back with dreadful reality to that gentle woman.

“My dear lady!” said John Littell, breaking the silence, “allow me as a friend of your husband—who, in midocean in an hour of peril, came to my aid—allow me now to come to yours. First of all (and I am not saying this egotistically) I am possessed of means and it will be a proud and happy hour for me when I can befriend anyone belonging to Robert Purdy, and more than this, although I do not wish to raise any false hopes in the hearts of yourself or Captain Henderson; I cannot reconcile myself to the fact that the *Katharine* was burned or even lost; and now in order that you may not wear yourself out with a hopeless grief, I would suggest that we follow a plan of my own daughter Helen, who may at this moment (aside from longitudinal differences) be engaged in this very plan: and I am indebted to her care and keen perception for what hope we have. My, or rather her, idea is, for a keen watch to be kept on all shipping reports, not only of New York but of all our American ports, and in addition to this we will also receive regularly newspapers from Hong Kong, Manila, Singapore, Batavia, and other Eastern ports. I

have personally arranged for all of these to be forwarded to my office in New York. They will even come from Sydney and Melbourne, Yokohama and Honolulu. Now it will require someone to scan these and collect anything that might have even the slightest relation to any missing ship, or wreck, or something observed at sea. This person must be one whom we can trust and will do it faithfully, and thanks to this unexpected meeting, we can decide upon that person right now. I think no one may be trusted to do this so well as one interested, and that person," he added with a cheerful smile, "is Mrs. Robert Purdy. And now that I have the floor, let me say further, that the papers are already coming in; so if our friend, Captain Henderson, agrees to it, I will have an office ready in the Mills Building to-morrow, it having already been engaged. As a matter of course I understand," addressing the others, "Mrs. Purdy resides in Schenectady, and will hardly know how to manage the change, so we will have a home ready for her here in New York. In fact, everything will be arranged."

"As to the home," interrupted Captain Henderson, "I have a large, commodious house, now so lonely to me. Will Mrs. Purdy and her daughter remain there until——"

"Yes! just the thing! I shall attend to the transportation of your goods and storage of the same at any convenient point you may want them. In the meanwhile you may wish to go back to your home, probably to-day. If you do, my secretary, Mr. Hunter and his wife will meet you and, if necessary, one or both will go with you to superintend everything regarding the 'flitting.'

"And now! Captain Henderson," continued this cheery man, "you may want to add something."

"Yes!" said the now brightened man, "I want to say that my housekeeper will be telephoned to come and take Mrs. Purdy and her daughter in charge, so that your Mr. Hunter may call at our house and arrange those details, say at three this afternoon, and it will certainly not admit of their going up the river to-day."

"Very good; that's just the thing! Now Mrs. Purdy we (or rather I) haven't given you any chance to raise your voice for or against. If my Helen were here I know she could have said more in less words, but of course you will accept the position? Remember it is Helen's proposition together with a few ideas of mine. She will attend to the Pacific Ocean end of it and be in constant touch with us. You would be surprised if you saw the

scrap book she already has, away off in that lonely island group. In fact we will keep the world under our eye."

The young woman could hardly express her thanks as she assented to the proposition. From the depths of despair her soul had risen to witness "the evidence of things not seen," but John Littell would not allow her more than to consent before he cheerily interrupted her and had all smiling in a moment. Then excusing himself for a moment he called out Captain Duncan for a few words and then returned to say good-by.

"And remember!" said he, as he bowed himself out, "Mr. Hunter and his little wife will call upon you this afternoon at the Captain's house."

"Well!" said Captain Duncan in his deep bass voice, "that man is sunshine in himself. I believe his men on the yacht would swim the Pacific to help him, if it were necessary, and his daughter, whom I met at the Cape, is just perfection."

Then he was silent. Did he doubt her theory in regard to the *Katharine*?

CHAPTER XXX

HOPE AT LAST!

“I WONDER,” said the elevator boy, “what they do with so many newspapers in room 207? The boy who brings them says they come all the way from Honolulu, wherever that is. That lady with her little girl can’t half read them. I saw the door open the other day—they seemed to be cuttin’ slips from them. The door is painted ‘Red Cross Line,’ and then they’s a big map on the wall with funny lines on it and red-headed pins stuck around on it.”

He was talking to the boy on the other car during the noon lull, but Number Two couldn’t give him any information more than that now and then a couple of gents, one of whom he said “had a voice like a foghorn” went in there and, said he, “the lady called me in yesterday to send the janitor up for to take out the old papers and I see the two gents measuring on that map and looking at those pins. Then there comes sometimes that good-natured fellow that gives me a quarter now and then. They say he owns a private ship that takes him all over

the world. There he comes now—always on the jump!”

“Up!” called No. 1; the door closed with a slight bang and in a short space, John Littell was on the second floor, knocking at the door of No. 207. In a few more minutes the elevator brought up Captains Henderson and Duncan, who also knocked and were admitted into No. 207.

The room was one well adapted for the work in hand; large and well lighted. On a table in the middle of the room lay three open books, the pages of which were blank, upon which were neatly pasted slips cut from newspapers, of which there were quite a number on the table not yet opened. On the walls were maps of Polynesia, Indo-China and the Sunda Islands in detail, while Mercator's projections of the two hemispheres on a reduced scale were lying on the table. By arrangement these three sailors met in No. 207 several times weekly to look over anything new that had been noted. The matter of the balloons was gone over and the positions carefully marked. There were several derelicts reported but none answering a description giving the slightest resemblance to the missing ship. A circular letter was formulated and sent to the United States Consuls at various points throughout

the East Indies, asking their co-operation in the matter of getting any clew that might exist. These letters were written from John Littell's office and forwarded at once. Nothing was left undone. The matter of balloons did not find a firm believer in Captain Duncan, who could not, for one moment, conceive how such a strange thing could happen on a ship. It was so foreign to his sea nature that it was simply out of the order of things.

"Who would make them, and where would the gas come from?" he sadly queried.

"Was there any sulphuric acid in the cargo of the *Katharine*?" asked Mrs. Purdy of Captain Henderson.

"Yes! there was quite a lot of it in iron carboys."

"Then!" said she, "the hydrogen gas for a balloon would be easy to manufacture. Robert taught me how to make various chemical combinations; among them was the manufacture of gases. He had a little laboratory at the foot of the yard up in Schenectady, where he tried many interesting experiments and always wanted me with him when he tried them."

John Littell nodded approvingly.

"Another point made," he said.

Thus the little party met and examined every

straw. Grain by grain was John Littell's faith strengthened but, strange to say, Captain Duncan sadly shook his head when he was alone. He had gone through the storm and knew its fury up to the time he was rendered unconscious by the lightning shock; it had then required the untiring efforts of his crew to keep the *Katharine* from being disabled. How would the few who remained carry her through if anything gave way? Thus he reasoned and not without grounds, yet hoping that he might be proved in error, but he never expressed himself outright as to his inmost belief.

The summer passed without a moment's relaxation on the part of the faithful censor who occupied Room No. 207. Then the fall set in again; the golden sun painting a picture of rare beauty in the Bay on just such an October day, as it had done one year before when she telegraphed the last long farewell from the landing stairs at the Battery. Again she could see the beautiful ship gliding down with the tide until at last it was lost beyond the headlands, disappearing into the dreamy distance. One year ago; and such a year! She stood looking out from the identical spot that lovely morning, but oh, how changed! Then the November gales and snow flurries came in to remind people that a sterner

season was at hand. But one bright, bracing morning in early December, the messenger came into No. 207 with his usual batch of papers from John Littell's office. Without a moment of delay each one was opened and carefully looked over. There was one from Honolulu, two from Yokohoma, one from Hong Kong, another from San Francisco, besides some answers to inquiries from Consuls at Singapore and Batavia. It so happened that the last one to be read was the *Hong Kong Times*. On the title page appeared the following item, the sheet being dated November 7th, 1894.

“The American ship *Laurence*, Captain Hobbs, from Norfolk, U. S. A., to Hong Kong with a cargo of coal, came into port yesterday. Her Captain says on the night of October 25th, Long. 92 deg. 16 min. E., and Lat. 7 deg. 16 min. S., they saw a ray of light like that of a search-light thrown up into the sky about the angle of 45 deg. It was apparently making signals and made the same one three times in succession. The light was from some point twenty or more miles to the west. It was made by throwing the ray up and down like a mighty arm or rod. The signal made was ‘four short—one short—one long—five short.’ Captain Hobbs made a note of this thinking it might meet the eye of some one inter-

ested. It seemed to be signaling at random as there was no response from any other point."

Mrs. Purdy read and re-read this with a palpitating heart. There again was the latitude and longitude almost precisely that of the balloons. Taking a pencil she feverishly noted it on paper " - - - - -
—— - - - - - " With a cry of joy she recognized the Morse characters, the meaning of which was now so plain to her, yet which, in her excitement, she had overlooked. Hastily ringing up on the telephone she called John Littell and Captain Henderson, who were in the room in less than a quarter of an hour. With trembling hands she followed out the item from the newspaper again. - - - - - — - - - -
" Help! " John Littell jumped up and almost shouted for joy, while Captain Henderson wiped away a tear that came trickling down his bronzed cheek.

" Here's Joe's idea at last! " cried Littell. " I remember they had a consignment of electric goods; they are stranded and safe on some island!—can't get away!—ship safe!—boys all right! It's all plain now.—Where's Duncan—Here he comes! "

Captain Duncan hastened in. When the situation was explained to him he raised his eyes to heaven and murmured:

" At last, thank God! "

CHAPTER XXXI

THE PARTY ON THE "AMERICA"

NINE days after the events recorded in the chapter just closed, or to be more exact, on the fifteenth of December, eighteen hundred and ninety-five, the *America* glided out of the Golden Gate bound for Apia. The beautiful yacht was saluted frequently as she passed, for rumor had gotten abroad telling of her errand and its remarkable history. On the main deck were Mrs. Robert Purdy and her young daughter, John Littell, Captain Duncan and Doctor Peale. The *America* ordinarily carried a crew of twenty-five men, but on this occasion there were six more for special work. Captain Henderson also wished to accompany the party, but it was thought best for him to remain in New York for the present. After an uneventful voyage the yacht stopped her swift propeller in the harbor of Apia, where Mrs. Littell, Helen and Miss Williams welcomed them, having received word only two days before from Captain Henderson who cabled to Hong Kong, from whence the telegram was forwarded by

a sailing vessel just ready for Samoa. For the first time, that day Mrs. Littell was told of the disaster to the *Katharine* and now also their hopes for the finding of the lost ones. The meeting between Helen and Mrs. Purdy was affecting. Their common cause had united them across half of the globe with bonds of love. Little Fannie Purdy at once became one of the family; she was christened Little Sunshine by John Littell; her bright happy nature won her to everybody. All haste was made to quit Apia so that in twenty-four hours the yacht was again on its way westward.

Mrs. Littell fully recovered her health, having been threatened with a pulmonary trouble, all of which disappeared, leaving her healthy and strong. It was then explained to the party how the search was to be made. In order that the most open route might be used, the yacht steered due west through the Coral Sea and then through the Arafura Sea, skirting the north coast of Australia to the open Indian Ocean. When they arrived near Long. 92 deg. E., they would proceed north on this line until near Lat. 7 deg. 15 min. S. There would be no sailing at night without constant use of the searchlight. Mrs. Purdy asked permission to learn to handle this; a privilege that was most cheerfully ac-

corded her. John Littell offered a reward to the man first discovering any signs of the lost ones, so that when they finally cleared Australia, heading northwesterly along the coast of Java, the excitement, though suppressed, was intense. Men were on the lookout night and day. Captain Jones, with Captain Duncan by his side, was constantly sweeping the horizon with a powerful glass, for they had now reached the ninety-third meridian and were sailing north, keeping somewhat west of that line.

On the promenade deck sat the ladies talking in low tones, one after the other sweeping the horizon with powerful binoculars. John Littell was feverishly pacing the deck, pausing now and then to gaze westwardly. The observation at noon placed them near the mysterious land. In about an hour more the sun will set, and then the gentle Margie Purdy will be the genius of the twenty thousand candle power search-light, with Helen Littell by her side, Joe's code in her hand; although in truth it was memorized long ago. A light supper was ordered, but no one cared for even that. Another hour passes, the sun disappears and night comes on with its characteristic quickness. Then steals out the glorious Southern Cross and its kindred constellations of the lower hemisphere, illuminating in quiet splendor the

dark blue dome hanging over that silent sea. Down in the yacht's dynamo room, the electrician has tested his voltage and knows the capacity of his storage batteries, for the speedy direct generator has ceased its low voiced song that has droned since morning, impressing itself, as it were, in such a mysterious way, on the leaden plates in the accumulator. All is ready for the magic contact that will send its energy forth into space again in the form of light as soon as it is turned on. Beside the cylindrical lantern stand Margie Purdy and Helen Littell; they have become united by a common bond in seeking for lost ones who had been mourned as dead, one searching for a loving husband, her best and dearest hope in this life; the other—well! all is not recorded that transpired during the pleasant week at Cape Town; both trembling with excitement of the moment. The switch is closed with a click; the carbons adjust themselves; then a narrow ray of intensely white light has thrown itself into the air, broadened by distance into a field of wonderful distinctness. It lights up the glittering waters, then quickly ascending midway to the zenith, it catches some low lying clouds or sweeping around in all directions, it takes in the vast circular field of waters, of which the beautiful white steamer

seems to be the absolute center. The circuit is turned off. Anxious eyes search the distance for a reply. Nothing but dark, impenetrable gloom surrounds them, broken only by the stars above and the arc lights on the foremast. The yacht has been stopped; there will be no more running that night, so that after repeated signals the watchers regretfully go below for rest. There is no fear that any part of the ocean in this section will be left unexplored, for the yacht will go north and south, each time keeping more to the west until the lost are found.

CHAPTER XXXII

CAPTAIN JONES HAS SUSPICIONS

THE following morning the same anxious watch was again commenced, although in reality it never for a moment closed on the part of the yacht's crew during the night. The run to the north was soon started under an almost cloudless sky. At noon observations were taken, showing that the yacht was at 92 deg. 30 min. East Longitude and Lat. 8 deg. 15 min. South. The charts indicated several atolls in this vicinity and it might be upon one of these they would be found. Shortly after noon the cry of the lookout announced "Land Ahead!" Scarcely visible to the naked eye, it as yet seemed only a small, dull-colored cloud on the horizon.

"It is an atoll!" said Captain Jones. "We will make it in about two hours."

As the land rose in the distance the excitement grew on the yacht. True, the narrow rim of land did not seem a hospitable place, but perhaps the missing ship had gained the inside and was disabled.

"We will go inside if you desire it and the passage admits," said Captain Jones to John Littell.

“By all means, if you can,” replied the latter. “We shall have at least three hours more daylight and it will probably be as good a place to anchor as New York harbor.”

By this time the yacht stood about a mile from the coast, slowly making for the lonely belt. When sufficiently near, the naphtha tender was sent out for soundings off shore, and along the passage to this singular ocean locked lake. Sufficient water was found for safety in the entrance through which the beautiful white steamer glided like a great swan. There was an oppressive silence on board. Even the faint churning of the screw could be heard in this great dead water as they glided along. Mrs. Purdy and Helen anxiously swept the inside shores for traces of the lost vessel, when someone called attention to something near the shore, about one-half mile from the yacht, which was yet near the entrance. With strange forebodings they headed for the object.

“A sunken wreck,” murmured Dr. Peale to Mr. Littell, who grew pale as they closed in with it.

“That’s not the *Katharine!*” said a deep voice from the bridge, “and beyond there is another hulk.”

The words of Captain Duncan took a load from the hearts of the anxious watchers, who beheld the dismal spectacle now close at hand.

“No! those vessels were never wrecked in here. They were brought in and then wrecked.”

The tender was sent to investigate, taking Captain Duncan with them. After giving them a careful examination, they returned to the yacht.

“No! they are strangers;—been in there for some years,—perhaps,” said Captain Duncan, turning to go forward, giving a peculiar look to John Littell who followed him.

“Poor fellows!” said Helen, “wrecked on this lonely strip of island. Do you think, Captain, there might be some of the crew wandering around this strange island?”

“Well! they might be, but it's not likely, unless they could find fresh water. At all events you might ask Mr. Littell to have the tender cruise around and examine the shores. You see the land is about two hundred yards wide from inside to the outer beach and I judge the inclosed sheet of water is about five miles in diameter—say fifteen miles around. That will take them a half a day to get over with making search on shore, too.”

Then, turning with John Littell, they walked for-

ward to where Captain Jones was standing and were soon engaged in a subdued conversation.

“Those vessels were not wrecked in here. They were burned, then sunk.”

“Burned? How? by whom?” asked John Littell.

“Pirates. We are in one of their nests now, but the foul birds are away. I don’t think there’s any danger as there’s not a rag of a sail in this pond now.”

“That’s just what I thought of the wreck,” said Captain Jones; then calling Mr. Harris, the first officer, he asked:

“Is all ready?”

“Yes sir! Everything ready to commence in a moment if necessary.”

John Littell looked at the two men inquiringly.

“We are ready for any trouble that may arise with these freebooters, should they come in here, but of course, there’s no use in alarming the ladies.”

“And will it be perfectly safe to anchor in here to-night?” asked Littell.

“Perfectly safe,” said Captain Jones, “but we will, as a matter of precaution, anchor near the middle and swing our search-light during the night. As soon as the ladies go below the men will receive

their rifles and the two guns will have their housings taken off. But I really do not think there's any danger. It's simply a matter of precaution."

When little Fanny Purdy knelt with her gentle mother that night and asked God's protection for their friends and for the dear ones for whom they were searching, she did not think that the steady tramping overhead was done by armed men already appointed by His providences to guard them.

CHAPTER XXXIII

“IS THAT THE ‘KATHERINE’?”

THE yacht's tender with five well armed men, under Mr. Harris, left her side at sunrise the following morning to make a complete search of the atoll, being all the time under the eye of the *America*, which stayed about a mile from shore. From the yacht they could see the little boat with its glittering engine slowly advancing around the great circle, landing and drawing out again at short intervals, until about noon, when they came aboard, having found nothing except that they had seen places on the north side where there evidently had been some small trees chopped down within a year. This was all; yet it was the mute witness that man had been there lately.

“What was the thickness of the stumps?” asked John Littell.

“Not over three inches! some less,” said the officer.

“What kind of tree was it?”

“Here's a branch!” said Mr. Harris, handing it to him. “It has a heavy, big leaf.”

"I can see only one reason for cutting them," said John Littell.

"And what's that?" asked Captain Duncan.

"For disguising a boat! Were many cut off?"

"No! we found only about half a dozen."

"For a small boat; they evidently saw enemies they wished to avoid. They must have built a boat and tried to escape; they found this island and were disappointed in it, having found or seen pirates here, disguised themselves and escaped."

"To where?" asked Dr. Peale.

"I imagine not far off: these cuts are not old. Captain Hobbs on the *Laurence*, saw the lights on October 25th, I think after they had been here. They can't be far away now."

The noon observation was scarcely taken before the *America* was again out on the open ocean. They decided now to sail in a circle of perhaps fifty miles in diameter, having the atoll as the center. This would give them large scope of observation. Commencing by steaming to the southeast, it was the intention to stand westwardly after getting about twenty-five miles from the atoll, and then keep going in a vast circle, giving them fully twenty or more miles' view from its circumference.

About three o'clock, the lookout reported three

distant sail to the northwest, almost lost in the hazy distance, evidently sailing south from the neighborhood of the atoll, but the *America* soon lost them in a dark hazy outline that rose on the western horizon.

“ Land Ho ! to the starboard ! ” called the lookout. There was now a break in the distant haze, giving them a clear view. To the west there rose a low, dark point from the sea. It was fully twenty-five miles away and darkness coming on rapidly. Crowding on all steam, the *America* fairly flew through the blue sea on a western course, but just as the land came fairly into sight, darkness set in.

“ We may run another half hour with entire safety ! ” said Captain Jones. “ Then we will be but a few miles from the coast, where we can lay to until morning. ”

With strange feelings of mingled joy and fear they saw the land coming into sight, but now effectually blotted out by the tropical night.

“ There’s a high point near the southern end of the island ! ” said Helen to her mother, closing the glasses. “ We could discern that much before the sunset. I am just too impatient for the sun to return again. ”

When the *America* stopped her engines, they had

moved probably to within three miles from the land, having approached with extreme care, taking soundings and carefully feeling the way with their search-light until the distant shore line could be distinguished. Just as two bells were struck, the yacht came to anchor for the night in fifty fathoms of water. Again Margie Purdy and Helen Littell stood by the powerful search-light which either of them could control like a toy. Suddenly a cry arose:

“*Look! Look!*”—A glorious beam of silver light arose from the land in front of them, flying into space from a golden point down near the distant water's edge; then it soared back over the inner land showing tropical foliage in a confused mass, and came to a rest at the water's edge to the north. For a moment stunned, then with a cry of joy and a prayer in her heart, Margie Purdy turned on the electric current. In an instant her powerful ray was high in the air, then sinking it down to the earth she tried to catch the source of the distant beam, but something intervened. Turning it to the north to give it a side view, she made the signal—3—6,—“*Is that the Katharine?*”

The answering ray rose and sank three times, paused an instant and sank and rose once more—3—I.—“*This is the Katharine.*”

A wild cheer broke out from the whole ship's company.

Helen leaned on her father's shoulder and wept for joy, yet notwithstanding the terrible strain, the indomitable Margie Purdy steadily signaled.—4—2.—“ *This is the America.*” Then discarding code signals she commenced a series of flashes lasting for a full minute, in the Morse telegraph code. She knew her dear husband could read them if he still lived.

“ *Is Robert there? This is Margie.*”

Quickly came the answer:

“ *Yes! thank God—all well—Come in by the Southern inlet. See beacons. Narrow channel.*”

The beam sank down and seemed to be sighting for a few minutes along the inner harbor.

“ It must be something serious to make them do that! ” said Captain Jones after a lapse of some minutes; as he spoke the words, the light veered around remaining so a short time, then suddenly died out and there was no further response to signals from the *America*. At last, when the current was shut off, the brave little woman at the search-light fell fainting into Helen's arms. When the crew saw the state of affairs, they begged Captain Jones to

allow them to try to make the bay with small boats, but it was decided that nothing could be done safely until daylight, as no one knew the shores, so that any attempt to enter might work more harm to the boats, than good to the crew of the *Katharine*, who were no doubt prepared for all emergencies. After the ladies had gone below, ready to be called in case the signals resumed, Captain Jones called John Littell and Captain Duncan to one side to discuss the matter.

"I think," said he in a low voice, "they just discovered there was some trouble in the bay. In view of what we saw at the atoll and then seeing the three sail that we lost, it may be that they have been called upon to fight pirates and about the first thing to suffer was their search-light. Of course we may not say anything to the ladies for this is only surmise."

"Have they arms on board?" asked John Littell of Captain Duncan.

"Yes! there is quite a consignment of Winchester rifles and cartridges. Harry knows it and it is likely that after their trip to the atoll they have gotten them out for service. Then Mr. Miller has his own guns with him, and woe betide the man upon whom he draws a bead, at any distance. Let us hope we are

mistaken. It may have been some stoppage of their electric apparatus,” continued he.

“ But why should the light be withdrawn from signaling and sighted elsewhere just at the moment they are found and have come back to us, as it were, from death ? ”

“ No ! ” said Captain Jones, “ I feel that something serious has happened and can assign only one reason and that I have already given. But let us hope that Providence, who has been so kind to us thus far, will also carry them through to the end. We will be under way just as soon as we get light enough to move in the morning.”

So the party separated for the night, but nobody slept; nor was there a sign of any kind from the strange island in front of them, in response to repeated signals from the *America*.

CHAPTER XXXIV

THE BATTLE WITH THE PIRATES

JOE was the only one who slept that night. Harry insisted that he should go below, which he did, accompanied by the faithful Toby, who had been kept in the forecastle during the action. The others remained on deck, anxiously watching for any move that might be attempted by their foes. Now and then signals were seen from the *America*, but they were powerless to respond. Mr. Purdy was stationed at the bow, Frank amidships with Andy at the stern, while Harry patrolled the vessel.

“It’s simply horrible!” said Frank, in a low tone to him, “to have this fuss at the very moment our friends come into sight. Since we have had some quiet, I’ve been trying to think how they found us, and there’s Purdy’s wife, too. The poor fellow was almost overcome when that part of the message flashed out.”

“Now that I think of it,” said Harry, “you remember how I told you how he seemed possessed the day we were upon Mount Hope, when he said as if

in a dream that our deliverance was coming. The poor fellow certainly had great faith."

"Did you notice to-night, he never swerved while he was swinging the search-light," continued he; "they simply began making a target of it and he swinging it just as we called. I looked at it a while ago; there are six bullet holes in it, every one of them he must have heard strike. Upon the whole, I'm glad it was put out of the fight. It's a wonder he wasn't hit. In the excitement of the moment, I never thought of his danger."

All this was carried on in a low tone as Harry stopped for a moment with Frank Miller. Then passing on he made a sharp search of the bay as he went along. Not a sound was heard excepting now and then a dull noise from the fleet of pirates as they were apparently engaged in repairing their consort.

So the night passed without further incident. Just before dawn, Harry made breakfast, of which all partook in turn, then assembling for one moment in prayer, they took their stations and watched for the return of day, the end of which none could foresee. The *Katharine* was still out in the bay, it having been deemed unsafe to draw her back into the creek in the darkness, but everything was in readi-

ness to take their old position as soon as it was light enough to see the shore. There was reason for this, in that, if the contest should go against them, the defenders could easily reach shore in case they could not escape on the *Edna*. The dynamo, of course, could not be of service any longer, but the storage batteries were still charged to almost their full capacity; as but little current had been used in the short time the search-light was in action. On the shore, the water wheel was humming under the pressure from the lake, while the dead armature buzzed around in its bearings, making itself heard through the still night. Andy again raised steam in the boiler of the hoisting engine, ready to pull on the inshore cable at a word from his young commander, whom he almost adored. Coming from the "Old Fatherland" at an early age, he retained that military respect and obedience ingrained in the German, but grew up among that thrifty population that settled along the Blue Mountains of Pennsylvania, imbibing their ideas and at last speaking their singularly elastic patois, which helps itself over stubborn sentences by the use of English or higher German with a freedom that makes Pennsylvania Dutch a law unto itself. Then drifting to the great metropolis on a coal barge loaded with shining an-

thracite, he found a new sphere in the service of the Red Cross Line, with which he had been for the past four years, it being to him father, mother and home. As he stood there at that early hour, his bared arms folded over the broad chest, looking seaward through the gloom, he softly uttered in his emphatic tongue his opinion of their foes, to whom he would show no mercy, nor did he ask, or much less expect any from them.

The eastern sky showed its first indications of sunrise that would suddenly come upon them and, wishing to move the ship unobserved, Harry gave the order to start the engine, which was done, drawing the noble ship stern first to her old berth just as the tide had swung her into the right position. The dawn had now advanced, making it light enough to see nearby objects, so by the time the *Edna* was secured under the stern, the little crew beheld their enemies about the middle of the bay, a full mile away, lying together under close reefed sails, evidently waiting for dawn to make an attack. Out on the ocean nothing was visible, the haze and light mist rendering even the islets invisible from the *Katharine*. And the *America* must certainly be only a few miles from that rocky shore.

“It’s a pity we hadn’t time to tell them the state

of affairs," murmured Harry. "They might have gotten in to help us," and then he thought of the danger to which they might have been exposed and dismissed the thought.

"There they go!" shouted Frank Miller. "One to the north, one to the south and one coming straight across; they can't make us out just yet and are going to surround us."

"They'll find out their mistake in a few minutes when they can see better," said Harry.

"The middle one is coming straight for us," exclaimed Joe.

"Sure enough," said Harry. "He evidently thought he ran into us last night and now that he can see us will come boldly. Reverse the gear, Andy; we'll teach him the trick he failed to learn last night."

By this time the diverging pirate vessels saw in the broad daylight that the *Katharine* was no longer out in the open water and were no doubt wondering whether they had seen aright, for there she was, placidly at anchor in the mouth of the creek; as a consequence before they could recover their lost ground, the central vessel was fully a half-mile in advance of the others. The position at this moment was like the head of a great arrow, the foremost vessel being

the point, while the other two were at the two rear barbs, and all three headed for their unfortunate victim, that, for want of a crew, could do nothing but wait. At least this is what the wily villains thought.

"They don't expose themselves much," said Mr. Purdy. "Even the helmsman has a plank protection."

"If it's not over six inches thick," replied Frank, "I think this 43-calibre will pierce it."

Then he slowly carried the dull blue steel barrel to position, for they were now almost in range.

"By the way!" said he, dropping it. "I almost forgot; there at the mainmast stands my double barreled Greener. The cartridges are loaded with buckshot; if they begin coming aboard, someone had better use that," and then his deadly rifle opened the battle. The splinters flew from the plank defense and a big Malay staggered out from behind the cover, evidently wounded badly, but the rapid Winchester had the range now and ball after ball tore its way through the plank, driving out at least half a dozen men, all more or less injured.

"They have the helm lashed, and are coming straight ahead!" shouted Harry, amid the reports from all the rifles.

"Now, Andy, let her go! Full head!" then seiz-

ing the wheel himself, the *Katharine* again slid out of the creek, headed straight for the wavering pirate that had just escaped the rising cable coming up like a serpent along his port side. Nor was the enemy idle; their bow gun had already been in position and two gunners came to grief, but the third touched the priming, a flash and a roar—then a round shot buried itself in the very cutwater of the big black vessel, now so nearly upon them.

“*Hold hard!*” rang out Harry’s voice. A grinding crash was heard, the force of which was augmented by the speed of the oncoming pirate, who received the shock end on, causing the big ship to tremble under the impact, while the smaller vessel reeled under the blow. There was no more firing on either side.

“*Haul back!*” shouted Harry. “We want to keep clear of him!” But it was not necessary, for the damaged corsair fell back under the blow and then settled by the head, sinking rapidly, her villainous crew rushing to their boats, signaling for assistance to the other two who were now yet a quarter of a mile distant. These had already commenced using their bow chasers, but in the supreme moment of the collision, which in all its details had occupied only a few minutes, their guns were not

noticed as they had not gotten the range. Taking advantage of the confusion, a hasty examination was made of the bow of the ship and beyond some slight damage to the cutwater the *Katharine* was intact, but the infuriated pirates now made the bay ring with their yells and it was evident that they were bent on revenge.

"We won't get off so easy now!" said Purdy, who had been standing on the bow pouring his fire into them. "They are going to bombard us with their guns at longer range than we can reply to."

"But they're not out of my range just yet," said Frank, springing up into the foretop.

In a moment more a white cloud issued from the bow of one of them, followed by a dull report. The projectile struck the water near the vessel and ricocheted up the creek. Before the second vessel could get her gun into use, a rifle spoke out from the foretop and instantly there was confusion at that gun, a shot striking it near where the gunner was standing a moment before.

"I have the range now!" said Frank, "they won't try it from there and the farther away they get the more inaccurate will be their firing."

The battle had raged for a full half hour. The *Katharine* had suffered some and several close calls

were made, for the pirates had commenced firing with small arms as the first vessel approached again. It was very evident they intended to depend upon boarding and had not expected such disastrous results to the first vessel. Had the *Katharine* remained out in the open water, they would have succeeded as they had planned an attack from three points. They now separated and were each coming in from an angle, avoiding the wreck which lay in their path, and were bent upon making one more desperate attack from two points. The breeze favored them in this, as it came directly from the east. Closing in, they discarded their useless guns, which none could approach without danger from the deadly rifles of their antagonists—they came on with every man covered or concealed. The helmsman this time protected by a bulwark of spars and other truck so placed that the only damage that the rifles did was to tear up the deck and pierce the light work behind which it was thought were concealed men. Not a sign of one was apparent. The great lateen sails, which these born sailors knew so well how to handle, were dexterously set and controlled from some hidden position. The decks seemed absolutely deserted, yet the two vessels came slowly but surely before the light breeze that would bring

them to the *Katharine* inside of ten minutes. Shot after shot was sent into them at long range as they came floating on, but without the least apparent effect.

Mr. Purdy and Joe threw on the switches, which, up to this time, had been left open, while Andy stood at his boiler with the ship's hose attached ready with one turn of the blow-off, to carry into effect his novel method of defense, which was to be used only as a last resort. The enemy were not more than a few hundred yards distant, now seeming to make less headway as they drew nearer. Out to the east, the light haze had lifted to such an extent that a vessel lying a few miles off shore might be visible, but no sign of the *America*. "Perhaps they have gone down toward the southern inlet!" said Joe. "They may have seen the beacon on Mount Hope and drew in that way," continued he.

"It's a great pity we hadn't time to tell them of that passage before these heathens attacked us."

"Purdy did say something to them, but the fight came on so quickly that I forgot to ask him or Joe what it was, and they haven't thought to tell us of it since," said Harry.

The situation at this time was growing desperate. Their enemies were so near them that small objects

could be discerned on their decks, and though moving slowly but surely on their prey, not a living thing was in sight. The *Katharine* lay quite close to the shore in the mouth of the creek so that the ship could be approached only from one side. This rendered it necessary for one of the ships to cross over her bows while the other came straight in from the bay and that one was as yet the farthest from the creek. The pirates did not see their error until the leading vessel found that they must either ground shortly or run across the cable and they well knew the consequences of such a move as was shown by the sunken wreck, the mast of which still projected some feet above the water. "I didn't think he would fall into a trap like that," said Harry, "for it practically puts him in a corner, for a while at least, but here comes the other one straight for our side."

Mr. Purdy had already opened fire on the barricade around the helm, but, like the other vessel, no one was in sight, though the gallant little crew well knew that beneath those shallow decks swarmed a cruel bloodthirsty horde, only waiting for their vessels to come alongside. It was but a matter of a moment before they could be close enough to grapple.

"Go ahead, Andy!" rang the clear tones of

Harry's voice, and for the third time the *Katharine* left the creek, sliding past her astonished enemies to the left, who, by this move, were completely uncovered from the rear, into which there was poured a volley as they passed, but with what result could not be seen.

But it was only a fight for time, as the other vessel now closed in and grappled before they could prevent it, and in a moment dozens of swarthy forms came clambering up the sides. As they came over the rail, they fell, as though paralyzed before the rude shocks of the ever awake storage battery. Frank's heavily loaded shotgun came into action, dealing destruction at each discharge; already he had received a cut in the left arm from a savage kriess from one of those who had jumped over without coming in contact with the electric wires. Mr. Purdy was engaged with three Malays, one of whom was just raising his pistol to his breast, when a bullet from Joe's rifle broke the assailant's arm. The decks were getting cloudy with smoke from the firearms and the electric wires snapped tongues of purple fire wherever an occasional kriess crossed them.

By this time a new danger threatened them for the vessel they so unceremoniously left in the creek

had dropped boats loaded with men to assist in the fray. It was well for the little crew that their assailants were not as proficient in the use of firearms as they were with their murderous crooked daggers that were more like swords, which these savage creatures handled with a dexterity that was marvelous. It was evident that the fight could not be kept up long against such overwhelming odds. True many of the pirates grasped the heavily charged wires and dropped back into the water, only to ascend again, avoiding them if possible. It, of course, gave more time to the beleaguered crew who were fighting their way back toward the stern amid shots and yells from their desperate enemies. Three times had Harry's life been in danger, each time saved by Andy whose whole care seemed to be in guarding the others. Then another boatload reached the deck with hideous cries, making a running charge toward the little party fighting its way to the rear. Suddenly there was a scream through the air, then a crash of woodwork on the pirates alongside, followed by a heavy, short report. Then another and another.

"Du Lievicha zeit dot kummt der dampfer! Hooray, de *America's* coming!" shouted the almost frantic Dutchman, who, until now, had

shown no emotion further than to express himself in his favorite way whenever he knew he hit an enemy. Above the din, the deep-toned whistle of the *America* came like a song, her rapid fire guns spitting out destruction at every shot. Not more than a quarter of a mile distant in the south, the magnificent yacht was racing full speed, her sharp cutwater sending the foam curling back along her pure white sides.

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“What does it read, Mr. Harris?”

“Here is a copy of the board, sir,” said that officer to Captain Jones.

The *America* had slowly approached the beacon-marked shore at the southern end of the island the morning after its discovery. Handing him the card, he read:

—Channel—

10 fathoms deep, 12 fathoms wide

Marked by buoys.

Dangerous rocks outside of buoys,

Ship *Katharine* at No. end of Bay

Plenty water inside.

“Is the channel straight?”

“Yes, sir! fairly straight. I think we can run

it with safety. If you desire it, we will lead the way with the launch."

"All right! pilot the way and trail a nine fathom lead as you go."

The day had now dawned. The graceful white steamer slowly made its way through Providence Channel lined on each side with dangerous reefs, now and then showing their ugly heads above water. Ahead of them they could see an opening into a hazy beyond, evidently a wide inside bay from which the sun had not yet chased the vapors of the night. Helen and Margie Purdy stood with clasped hands as they progressed through the narrow strait. Then the launch, which had kept a few fathoms in advance, shot out into open water and stopped for orders, reporting deep water. To their left arose a beautiful dome-shaped eminence covered with tropical vegetation, while on the extreme summit stood a beacon which they had seen as they approached the island. The two young women silently wept as they pictured how the lonely castaways might have watched from that beacon standing gaunt and grim on the crest.

"That sounded like a gun!" said the second officer, as a dull report broke the stillness of the morning. Then another report.

"Has the *Katharine* any guns aboard?" said John Littell in a low tone to Captain Duncan.

"No! but I wish at this moment she had," said he with an anxious look on his bronzed face.

By this time the haze had risen and disclosed a scene that created a thrill of horror on the *America*. About three miles to the north they saw two vessels under lateen sails making for a point inshore where their powerful glasses showed the tops of a ship evidently at anchor. Then a cloud of smoke unfolded itself from one of them and before the dull report could reach them, Captain Jones rang for "Full speed ahead!" A yell broke forth from the crew—"Pirates!"

"Mr. Harris, hand out arms! make ready the guns!" then turning to the ladies Captain Jones politely requested them to step below.

Mr. Harris and the second officer had the rapid fire guns ready for action when Helen Littell sprang forward, saluting the Captain.

"I claim the privilege! Will you allow it?"

"With pleasure! There is no one on this boat can serve it better. We will be in range soon. Fire at will. Better take this fellow who has grappled."

Then rang out a sharp, loud report and a four-pound projectile crashed into the hull of the aston-

ished pirate; then another and another in rapid succession from the two guns, every shot telling, as the yacht flew along. At this time one of the vessels came out of the creek and headed up the bay, followed by the spiteful projectiles from the yacht, which was now not a quarter of a mile away. The second vessel hastily commenced clearing itself, but before the last of the assailants jumped over the sides, there arose a white cloud of dense smoke from the deck of the ship where a fearful battle had raged. They had heard the rapid discharges of guns mingled with the yells of the attacking outlaws, then, with the white pall over them, the battle ceased.

Horror and anxiety were depicted on the faces of the rescuers, for the moment the escaping pirates were forgotten as the yacht approached the ship, from which the smoke of battle was slowly disappearing.

Leaving the ladies behind, the launch, with Captain Duncan, John Littell, Doctor Peale and Mr. Harris, hastily departed for the *Katharine*.

"What's that?" exclaimed John Littell, pointing to a mast projecting from the water in front of the *Katharine*.

"A sunken wreck," said Captain Duncan. "But

how did they do it? Ah! I see now. Harry has been using a method we sometimes resort to for pulling into berth at docks."

"They used steam!" said John Littell, "and depend upon it we shall see that it has played an important part for the boys before this."

"Ship ahoy!" hailed Captain Duncan's loud, bluff voice, but it was hardly necessary, for expectant forms were awaiting them at the rail, and one sent a cheerful answer.

"I see but three," said John Littell, with an inward feeling of dread.

"There are five, or should be if the Dutchman is with them," said Captain Duncan, then rising in the launch with suppressed excitement, he exclaimed:

"Purdy is missing, and perhaps Andy!"

They reached the deck; Joe threw his arms around Captain Duncan's neck with a cry of joy; then bursting into tears, seized Doctor Peale's hand and fairly dragged him to the rear, hastily followed by the others. There on the deck, with his head in the faithful Andy's lap, lay Robert Purdy, wounded and nigh unto death. Hastily opening a small case of surgical apparatus that he had brought with him, Doctor Peale at once commenced an examination of the wound. A fearful jagged cut in the left breast,

from which the blood was slowly trickling. The almost unconscious man had barely strength enough to raise his hand, which was grasped by John Littell and then with a faint smile, relapsed into insensibility.

Doctor Peale knelt by his side, placing his ear in the region of the wounded man's heart, rose and turned to the silently weeping boy, saying:

"My son! I think he will live."

There was not a face in that silent little party that was not wet with tears, but the cheering words turned them to tears of joy.

"It is a fearful cut!" said the surgeon after he had made a thorough examination, "and he is near the brink. Let us hope——"

"And pray!" said the deep-toned voice of Captain Duncan.

Sending the launch back to the *America* for help, a boatload of men came and they, under Captain Duncan's directions, soon cleared the deck of all traces of the awful fight. Such bodies as lay there were carried up the bay and consigned to the bottom before the ladies were allowed to come over. Then John Littell, taking the launch, returned to the *America*. There were anxious faces awaiting him.

"Oh, why doesn't he call out now," murmured

Helen as the sprightly little boat approached the iron stair.

Oh, mysterious "Lines of Force"! There are influences that are far stronger than yours. They created a soul magnetism that has gone through time and space, drawing loving souls to their affinities. Now, in the supreme moment of danger and peril, that which was a sweet secret in Helen Littell's heart, expressed itself in an agonized cry:

"Father, are they safe?"

"Yes! all but one; he is wounded, but will recover with God's help. It is Robert Purdy."

With a cry of grief, the devoted wife sank fainting to the deck.

CHAPTER XXXV

THE "KATHARINE" LEAVES HUDSON ISLAND

ANCHORED out in the bay, away from all extraneous sounds, for men were busily engaged in overhauling the imprisoned ship preparatory to towing it out to blue water; was the *America*. Down in the beautiful cabin was gathered a silent group. To the right opened a door into a commodious state room, from which, at intervals, came expressions of delirium. At the bedside of Robert Purdy, for this vessel was fitted like a luxurious home, stood Doctor Peale, thoughtfully gazing at a surgical thermometer.

"Temperature 103!" he murmured with something like a stifled sigh as he replaced it in its case. On the opposite side of the bed, with the sufferer's hand in hers, seeing only the loved form before her, knelt Margie Purdy in silent prayer. For a moment not a sound escaped the wounded man's lips, then as if in a dream,

"They will come;—I know it.—Joe, throw in the switch!—It's Margie herself! I——"

Then the voice dropped to an unintelligible whisper. An hour of silent watching passed. Once more Doctor Peale felt that fevered pulse. An expression of surprise covered his face; trying it again he then placed his hand on the high forehead of the suffering man. It had broken out into a light perspiration. Trying his temperature once more, he turned and said in a low tone:

“And now, my faithful nurse, he has passed the danger line. Three weeks in this pure air may see him strong again.”

Even as he said so, the wounded man turned his face to his devoted wife and murmured her name.

The crisis had passed! There was joy in the hearts of that waiting little company when the surgeon gave them the glad news, but cautioned them against exciting the patient, who would, if nothing unforeseen occurred, be able to talk freely in a few days. The news was taken to the *Katharine* by the launch; when it reached there, three ringing cheers were heard across the water, but Andy did not join them; he wept for joy.

There was another assembling of that same party in the handsome cabin of the *America* about a week later, this time under different circumstances.

Robert Purdy had grown stronger to such a degree that he now was able to occupy an easy chair. There was one more in the group this time, for Andy had been summoned over from the ship that was now almost ready to depart with a crew of twelve men taken from the *America*. Toby was there, too, and became a general favorite but he always found a place near Joe, from whom he could hardly bear to be separated.

For the first time the battle was talked over in all its details, and then as Andy was called upon to describe it, he told how, just as the yacht's guns commenced firing he turned on the blow-off at the boiler and dashed into the midst of the last gang that had come from the small boat and distributed his steam and boiling water with a liberal hand just as Mr. Purdy was struck down. He told in his comical way how he "breed" them as they rushed with yells of pain from the deck amid the reports of the yacht's guns and the roar of his terrible steam hose.

"Sie sin gore avich gesprunga," said he excitedly, forgetting that the amused Purdy was the only one who understood him. Then the company broke up for the evening; after an excursion was planned for the following day, which would be the last for the

Katharine at Hudson Island. The *America* was to tow her through Providence Channel within forty-eight hours.

At eight o'clock the next morning, the *Edna*, accompanied by the yacht's launch, gayly left the side of the *America*, headed for the creek. There were in the boats John Littell, Helen and Mrs. Littell, Harry with Emily Williams and Miss Fannie Purdy; while Doctor Peale, Frank Miller, Joe and Toby had already gone in on foot, awaiting the party at the Singing Falls. As they moved up the creek, resplendent with tropical vegetation and alive with beautiful birds, they could not repress their admiration of the sight, but when they reached the elevation and saw Fairy Lake, a spontaneous cry of surprise arose from the delighted party. Then the Temple was visited. Helen and Emily Williams took several photographs of the strange old ruin, as the explorers rambled through its silent courts, while their admiration of the massive proportions and beautiful architecture was unbounded. Then there was an afternoon dinner at the Lake, all agreeing that there was but one thing wanting to make it a perfect day's outing, and that was the presence of Robert Purdy and his charming wife. When the party assembled at the Falls for their trip down the

creek, it was discovered that Helen Littell and Harry Henderson were missing.

"I don't think it will be necessary to send an expedition after them," said Frank, and then added with a smile, "I guess this is a case where Joe's signals won't work."

But Joe was an innocent boy still, and did not comprehend; however the missing pair made their appearance shortly, loaded with tropical curiosities, and looking very happy.

Notwithstanding the work done upon the *Katharine*, Captain Duncan said she would not be ready for another day, which was taken up by John Littell with Frank and Joe, in a trip to Western Bay and the Oil Spring. They returned in the afternoon, when the launches were once more engaged in another careful survey of Providence Channel, showing that the *Katharine*, with great care, could be towed out the following morning as soon as the tide permitted.

Taking the ship in tow during the afternoon, the *America* steamed down the harbor to the point where the *Katharine* anchored after the awful fight with fire and storm. It being the last night at the island, Helen held a reception on the *America*. There was music by an excellent orchestra from the yacht's crew, followed by games and amusements of

different kinds. Before sending the men to their quarters, they were assembled on the main deck, where, in a neat little speech, they were thanked for their faithful services by John Littell, who further gladdened their hearts by stating that a handsome bonus awaited each one at Hong Kong, from Captain Henderson, on behalf of the Red Cross Line. Three ringing cheers were given for the speaker, then three more were proposed by Captain Duncan for the gallant young Captain and his little crew who brought their ship safely through fire and storm, and finally a rousing cheer was given for Joe and his signals; then the men turned in for the night, for a critical piece of work was on hand for the next morning.

The party in the cabin were not bound by rules of discipline. There were Captains Jones and Duncan, and John Littell engaged with Frank Miller off in the smoking room. Mr. Purdy with Mrs. Littell and Margie Purdy and Emily Williams seated at a table engaged in earnest conversation, while Joe circulated everywhere. The bright, tropical moon looked down on a truly happy party that night, but none happier than Helen Littell, unless it was Harry Henderson for somehow these two had again started off for a short stroll on the moonlit deck.

Before the party broke up for the night, it was arranged that Mr. Purdy should remain on the yacht until she reached Hong Kong, first stopping at Manila to see to the delivering of some of his electrical machinery, which he laughingly said might now be out of date for the electrical progress nowadays was very rapid.

As to the island itself, there was nothing to be feared from the pirates again and furthermore, since it was now formally taken as a possession of the United States, a gunboat would be sent there from the East Indian squadron to break up their lawless practices.

“That they were not destroyed right here was simply owing to the desperate state of affairs on the ship,” said Captain Jones, “but I think they went off with so many marks of our displeasure that they may be glad to have gotten off at all.”

The following morning, just as the tide turned, the yacht made fast a steel hawser to the ship and slowly drew into Providence Channel. Captain Duncan put his best man to the wheel. Slowly but surely the gallant ship made her way between the jagged rocks through which she dashed, over a year ago. The narrowest part of the channel is passed; in a short time the noble ship made her bow to the

gentle swell of the Indian Ocean. Then the hawser was cast off and sail made to a favoring breeze from the northwest.

The yacht remained behind for a while to run across to Western Bay to examine the coast as to a possible harbor, intending to catch up with the ship during the afternoon. As the vessels parted, there was a signal made by a fluttering handkerchief from the stern of the *America* to a little group on the cabin deck of the departing ship. It said “6—4,” whereat the young mate blushed deeply; Frank Miller and Joe smiled pleasantly but said nothing.

CHAPTER XXXVI

THE ISLANDERS REUNITED

SIX weeks after the foregoing, the Hong Kong *Times* of April 1, 1895, contained the following article:

“Our readers may remember an incident recorded in our issue dated November 7th, 1894, in which Captain Hobbs of the American ship *Laurence* tells of a singular light or signal he saw in the west while passing along the west coast of the Sunda Islands. It was repeated twice, and although several miles away, he made a note of it, as before stated.

“Now comes to light one of the strangest occurrences that has ever been noted by the *Times*. The signal was made by a search-light from the Red Cross Line ship *Katharine*, that was reported on fire and afterward lost in the terrible hurricane that swept the Indian Ocean in January, 1894.

“Most of the crew escaped by boats after the vessel had been struck by lightning, leaving the first mate, one of the crew and three passengers to take the last boat which was destroyed by the storm be-

fore it could be launched. Some time after that a cloud of white smoke seemed to envelop the ship, which was seen no more by the struggling boats, and was given up for lost.

“The little crew, however, managed to extinguish the fire by using live steam from their hoisting engine, and this no doubt, was mistaken for smoke, while the vessel kept on before the storm which drove her through a chain of reefs as by a miracle, to an island that hitherto had been mapped as an atoll, but is described as having a good harbor and is of considerable extent. Here they remained for nearly a year, securely imprisoned in a large bay. Among their cargo was electrical machinery. They found a fine water power and set up an electric light plant both for signaling and light. It was while practicing with a search-light that the signal was made that was seen by Captain Hobbs. A copy of the *Times* containing his account reached New York and was seen by the wife of a Mr. Purdy, an electrician who was one of the passengers on the missing ship. She at once deciphered the meaning of the flashes into the word: ‘H-E-L-P,’ and that, combined with some other circumstances, resulted in sending the steam yacht *America* to make a search for the lost vessel.

“After a patient cruise she found them, and just in time, as they were in the midst of a fight and were almost overwhelmed by a gang of pirates infesting these islands. The *Katharine* was towed out of her prison and arrived here yesterday in good order, accompanied by the steam yacht *America*, Mr. John Littell, owner. The U. S. Cruiser *Bennington* was at once detached from the Eastern squadron and will proceed to the island, which is now the property of the United States of America; and clear out the pirates existing in that section. As soon as possible a Red Cross Line steamer leaves with material for use of a colony that will be sent there soon from America. Mr. Littell's yacht leaves here for New York via the Suez Canal in about a week. Among her passengers are Mr. Robert Purdy and his family. Mr. Purdy is just recovering from a terrible wound received in the fight with the pirates. Mr. Henderson, the young mate in charge of the missing vessel, is well known in Hong Kong, having been a relief captain in the service of the Red Cross Line for some years past. He will remain here, taking charge of their Hong Kong offices. We welcome him to our midst, but rumor has it that he will leave us (temporarily, we hope) inside of a year. We wish him much joy.

“It is a singular fact that this rescue was brought about by following out the idea of Mr. Joseph Henderson, a bright boy of fifteen, one of the lost crew. He had been aboard the *America* at Cape Town, where the vessels were in company for several days and while there he suggested the idea of communication by search-lights at night, for which purpose Miss Helen Littell of the *America* arranged a code for him, and this boyish whim of his eventually led to their discovery and rescue.”

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The Northern Pacific mail steamer *Victoria* from Yokohama came to a rest at Tacoma after her long trip of six thousand miles, one bright morning in September, 1895. Among the passengers were two young men of about twenty-seven and a youth of seventeen. Their bronzed, healthy complexions showed that much of their life was spent in the open air and something in their manner unmistakably betokened the sailor. Arriving at the Hotel Tacoma they at once procured tickets and engaged sleeping accommodations for New York by the “North Coast Limited,” leaving at eight o’clock that same evening, via the famous Northern Pacific Railway.

"It begins to look like home," said Joe, as they glided past the site of the famous White City, at Chicago, and the following evening when the Limited Express rolled into the great depot at Jersey City, our travelers found awaiting them Captain Henderson, John Littell and Andy. There was an affectionate greeting from the sturdy old sailor, who shed tears of joy as he kissed his boys as he ever had since their baby days.

While John Littell was shaking hands with them, suddenly Joe was leaped upon from behind and almost overcome by Toby, who had been held aloof by Andy, but when the dog heard those voices, nothing could restrain him. He fairly howled for joy when he saw his young master. Andy had returned with the *Katharine* two weeks before, and had asked permission to go to the depot to meet the returning wanderers. When the "Annex boat" was tied up near the Brooklyn Bridge, he came to say good-by to the party, but Captain Henderson had arranged otherwise; inviting him to go with them to the Heights to his home, which invitation the bashful Dutchman blushingly accepted. There was joy in that home this lovely September evening, but what shall we say of the joy that reigned in the Littell mansion a few hours later.

And then the telephone rang up saying that Poughkeepsie wanted to speak to "73 H," which was Captain Henderson's residence. What a glad welcome over that slender wire from Margie Purdy, and then came the manly voice of Robert Purdy himself, now entirely recovered in health. Oh, the pleasant days they promised themselves! And of the joyful event to transpire early next month, they spoke of that, too and then said good-night and "rang off."

The following morning, Andy was summoned to the office of the Red Cross Line. In a private room were Captain Henderson, Harry, Frank and Joe. Then came Captain Duncan and John Littell and in a few moments more the door opened and Robert Purdy was among them. Maybe there were just a few tears moistening the bronzed cheeks of the two old sea captains when they saw that meeting!

Toby was there too; in fact he was everywhere, but always with one eye on Joe, whom he determined not to lose again. It was a different meeting this time from that held there almost a year before. There was, after a while, as by mutual understanding, a silence during which Andy was called into the room, blushing furiously.

"Immer und evich wos maned des?" he said

softly to himself, as he saw the company inside, but he entered and stood there abashed and trembling. This man, who faced danger without even a thought as to its consequences.

“Andy!” said Captain Henderson, “the Red Cross Line, in recognition of your services,”—here he looked helplessly at Purdy, who simply whispered a single word in his dialect, putting him at ease,—“have decided to promote you, and to this end offer you charge of their wharves either here or in Hong Kong. It is for you to choose”—he understood it now—“or probably it may suit you still better”—another helpless look toward Purdy—“to become the foreman of the Hudson Island Improvement Company, Limited, capital \$100,000, of which you are hereby a stockholder” (“Du lievicha zeit vos maned des?”) in grateful recognition of your faithful services to my boys,” handing him an envelope with stock certificates to the amount of five thousand dollars.

There was a moment's silence; then Robert Purdy laid his hand on Andy's shoulder and on his behalf responded to Captain Henderson.

“And!” said he, “there is still one more matter to be acted upon to complete this morning's business! I received a letter yesterday in regard to a matter

that concerns the little crew of the *Katharine*. With your permission, gentlemen, I will read it now.

“ ‘*Bailey and Co., Jewelers.*

‘ NEW YORK, September 20, 1895.

‘ MR. ROBERT PURDY,

‘ DEAR SIRs—We have examined the pearls left with us and place a value on them, in the aggregate, of \$150,000.00. We will pay you that price for them, if you desire to sell, or will dispose of them at a higher price, if it is possible to get it, at a commission of 2 per cent.

‘ Yours respectfully,

‘ BAILEY & Co.’

“ Now, inasmuch as I have been made trustee in the matter and as all are here who are concerned, we may agree as to the acceptance of this offer.”

It was agreed at once to sell, but Andy sat in a daze and could not breathe freely until he was outside again, after John Littell and Captain Henderson offered to take care of the faithful fellow’s interests.

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October 10th came again with its usual glories. This time there was not a noble ship sailing away for the eastern seas, although by a mere coincidence

the *Katharine* was almost ready to sail on a similar trip. Up in the City of Churches, there was a more joyful occasion, where the same actors would take prominent parts. At just three o'clock that sunny afternoon, while the great organ of the Episcopal Church was pealing forth the Wedding March, a young man whom we recognize as Harry Henderson, came in from the side and took his station at the altar and there awaited a bridal party moving up the main aisle. First came Frank Miller and Emily Williams, then Joe Henderson with a cousin of Helen's; following the latter Helen Littell, leaning on her father's arm.

To the right was a body of sailors in white suits, the crew of the *America*, while ranged alongside of them in neat blue sailor rig was the crew of the *Katharine*, among them Andy in his boatswain's rig. Robert and Margie Purdy and their daughter Fannie, Captain Duncan and Captain Jones with all their officers, occupied prominent positions among the host of guests. Silence reigned supreme while the vows were spoken that made Harry Henderson and Helen Littell man and wife. The great organ commenced a bright, cheery march as the party turned toward the door; when there was a commotion at the rear of the church. A dog dashed up the aisle

regardless of proprieties and in an instant Toby kissed the whole wedding party, ending up with Joe; looking daggers at the ushers who had attempted to keep him out. Helen leaned and patted him and then Mr. Toby marched out in triumph with his young master.

The papers, in the description of the wedding the following day, stated that the bride received from the crew of the missing ship, and wore at the ceremony, the finest necklace of pearls ever seen in this country.

At eight o'clock that evening a merry party again congregated at the great Pennsylvania Railroad station to bid good-by to Harry and his bride. As the train moved out, Joe took his handkerchief and quickly waved

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whereupon Helen threw a kiss to him and then the train was gone.

THE END

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